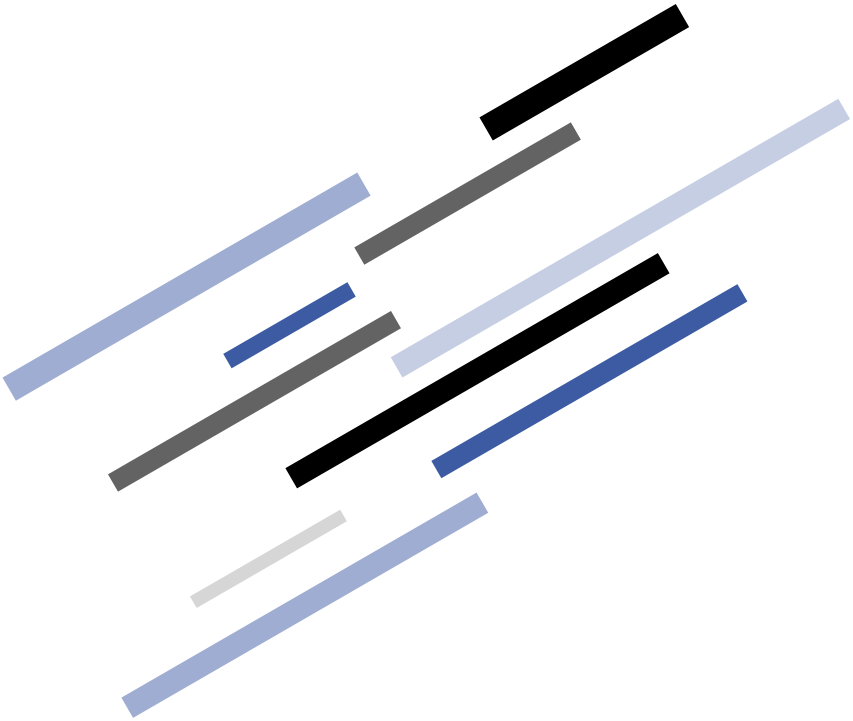
CSX300-09

IMAGE SCANNER

SERVICE MANUAL

MANUAL NO. CSX300-UM-251



GRAPHTEC

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1. OVERVIEW

1.1 Standard Specifications

Item		CSX300-09
Document size		ANSI E to ISO A4 Maximum width: 965 mm; minimum width: 257 mm
Effective scanning area		Maximum width : 932.2 mm Maximum length : 16 m*1
Guaranteed scanning precision range*2		841 mm x 1189 mm
Document thickness		Up to 0.8 mm (including the carrier sheet)
Optical resolution		600 dpi
Interpolated resolution		100, 200, 300, 400, 600, 800, 1200 dpi
Main scanning system		Contact image sensor system (five A4 sensors in a zigzag pattern)
Sub scanning system		Document travel (sheet through) system
Scanning speed*3		400 dpi, ISO A0 size High-speed scan: • Monochrome: 8 s • Grayscale: 23 s • 24-bit color: 62 s Normal scan: • Monochrome: 14 s • Grayscale: 26 s • 24-bit color: 75 s High quality scan: • Monochrome: 18 s • Grayscale: 33 s • 24-bit color: 100 s
Scanning precision*3		±0.1% or ±1 pixel, whichever is larger
Gradation		Monochrome : Bilevel, intermediate tones (dithering, error diffusion) Gray scale : 256 shades Gray balance : 256 shades Color : 24-bit
Threshold value		A DSP (digital signal processor) enables automatic setting of the threshold value (monochrome scans only)
Color space		sRGB compatible
Sensor	Total number of pixels	22,020 pixels
	Output	Color: 42 bits/pixel, Grayscale: 14 bits/pixel
	Light source	LED (RGB)
Interface		USB 2.0
Output		Image data
Rated power supply		100 to 120/200 to 230 VAC ±10%, 50/60 Hz
Operating environment		Temperature: 10˚C to 35˚C Humidity: 35% to 80% RH (non-condensing)
Power consumption		60 W or less (5 W or less in power-saving mode)
External dimensions (approx.)		1097 (W) x 160 (H) x 332 (D) mm (without stand)
Weight (approx.)		13 kg (without stand)

*1 If the document is a long-length document, the actual length that can be scanned is limited by the available memory (hard disk or other data storage device) of the computer to which the scanner is connected, and also by the grade of the medium being scanned.

*2 Notes on scanning precision

The scanning precision may vary slightly depending on the grade and thickness of the medium being scanned, and on the operating conditions. The precision figures above were measured under the operating conditions described below.

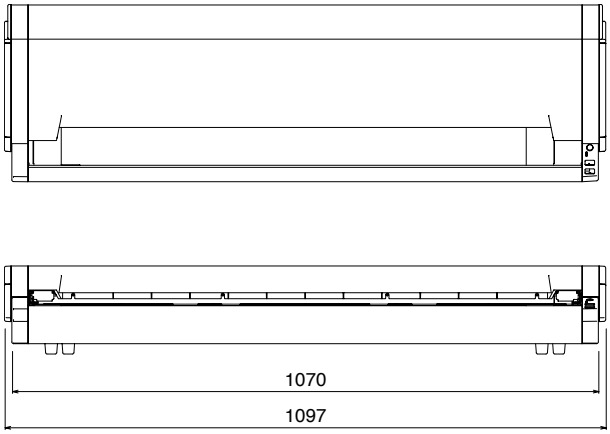
- Special test chart: Mylar sheet #300
- Guaranteed precision conditions: Temperature: 23°C ±5°C; Humidity: 55% ±15% RH

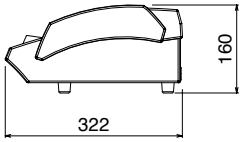
*3 Including data-transfer time
The following system was used to measure the scanning speeds.
• CPU: Pentium 4, 3.2 GHz or better • Memory: 1 GB or more • Interface: USB 2.0
The scanning speeds may be slower depending on the PC system used.

1.2 External View

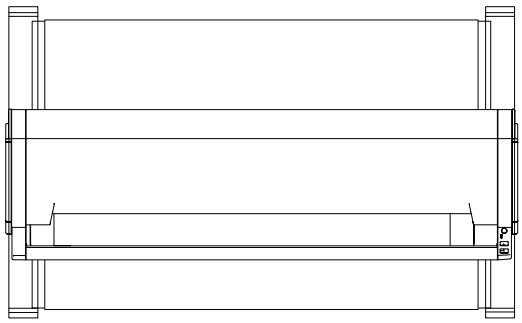
External Dimensions

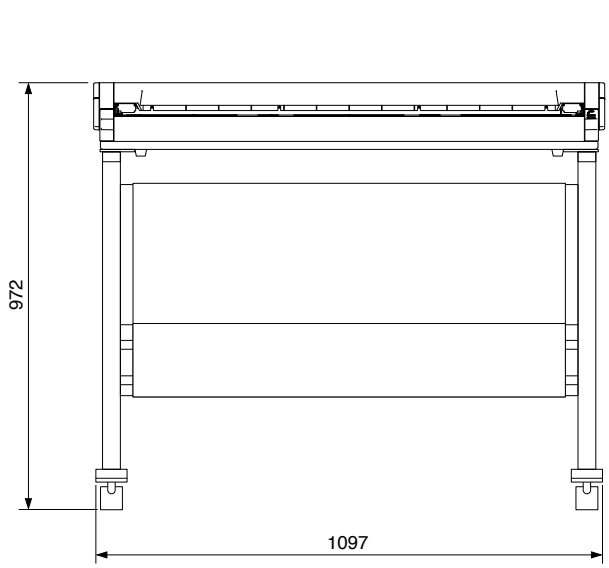
Unit: mm
Dimensional accuracy: ±5 mm

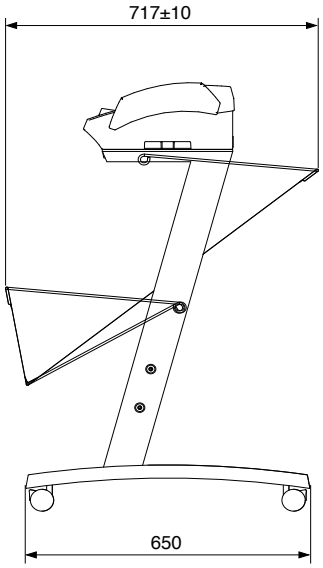




External Dimensions with the option stand



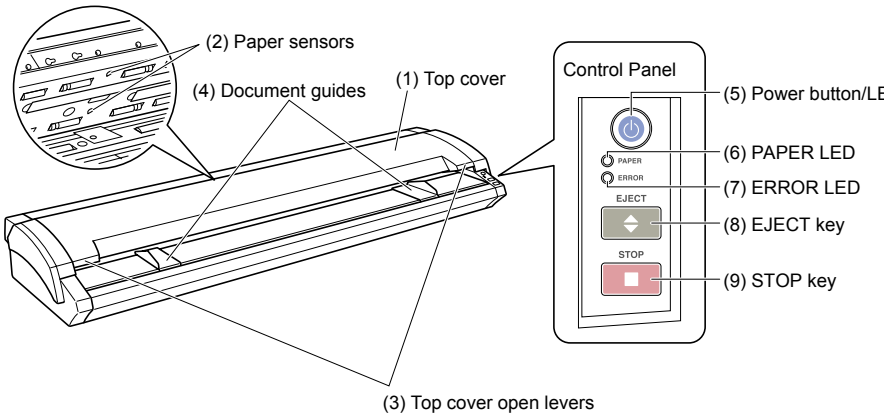




2. PART NAMES AND FUNCTIONS

2.1 Part Names and Functions

Front View/Control Panel



Top cover

(1) Top cover.....Open the top cover to clean the document hold-down unit and contact glass plates.

(2) Media sensors.....These sense whether a document is present in the scanner.

(3) Top cover open levers.....Press these levers to open the top cover.
If the top cover is opened during a scanning operation, the operation will be stopped compulsorily.

(4) Document guides.....Use these guides to determine the position of a document when you load the document.

Control Panel

(5) Power button/LED (blue).....Controls the on/off status of the power supply to the scanner.
Lit: The scanner is turned on.
Flashing: Flashes when the scanner is in power-saving mode.
Unlit: The scanner is turned off.
Lit: Lights when the scanner is turned on and remains lit while it is operating normally.

(6) PAPER LED (green).....Lit: Lights when a document has been loaded.
Flashing: Flashes while image data is being scanned.
Unlit: Normal status (Local status).

(7) ERROR LED (red).....Lit: Lights to indicate a hardware error.
Flashing: Flashes when any of the following occurs:
• A document is detected during the self-test when the scanner is turned on
• When a paper jam is detected
• When the top cover is open
• When the document length is shorter than the specified scan length*1

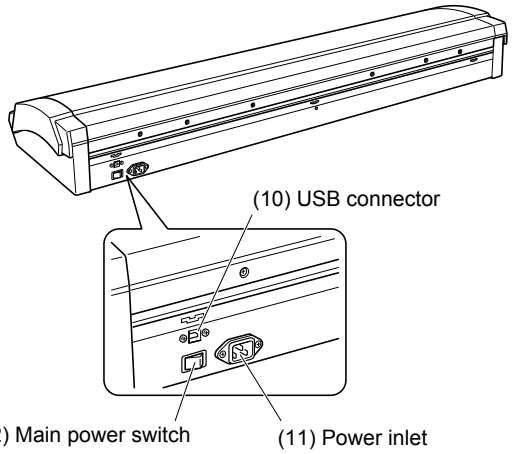
*1 When “Confirm” has been selected for the End-of-paper Processing setting in the driver software.

Unlit: Normal status

(8) EJECT key .....Press this key to feed the document.
If this key is pressed when the scanner is in document-loaded status, the document-loaded status is canceled and the document is ejected to the front of the scanner.
If this key is pressed after the scanning operation has been canceled or after scanning of the document was halted partway through the scanning operation, the document-loaded status is canceled and the document is ejected to the rear of the scanner.

(9) STOP key.....Compulsorily stops scanning of the document.
If the ERROR LED flashes when the top cover is in the closed status, press this key to suspend the scanning operation and check whether a paper jam has occurred.

Rear View

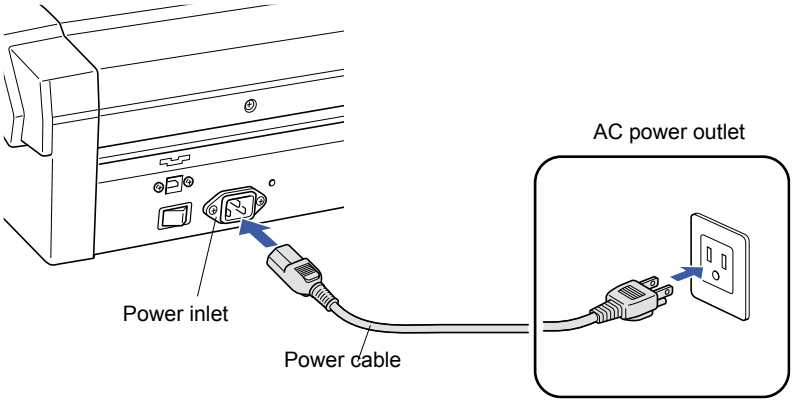


(10) USB connector.....Used to connect the USB interface cable.
(11) Power inlet.....Used to connect the power cable.
(12) Main power switch .....Used to turn the main power supply on or off.

3. CONNECTION AND PREPARATIONS

3.1 Connecting to the Power Supply

Connect one end of the power cable provided to the scanner's power inlet and the other end to an AC power outlet of the rated supply voltage.



3.2 Turning the Power On and Off

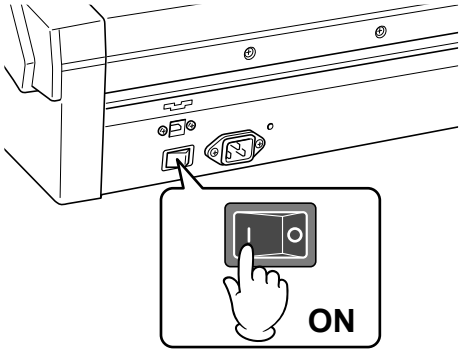
The LED (blue) on the [POWER] button changes as follows to indicate the scanner's power supply status.

- Unlit: The scanner is turned off.
- Lit: Lights when the scanner is turned on and remains lit while it is operating normally.
- Flashing: Flashes when the scanner is in power-saving mode.

Turning the Power On

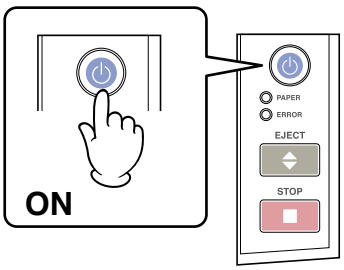
(1) Connect the power cable.

(2) Turn on the main power switch (the | side).



Press the [POWER] button on the scanner's control panel.

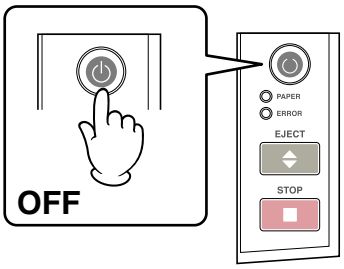
When the scanner is in the power-on status, the [POWER] button lights blue.



Turning the Power Off

Press the [POWER] button on the scanner's control panel.

When the scanner is in the power-off status, the [POWER] button LED is extinguished.

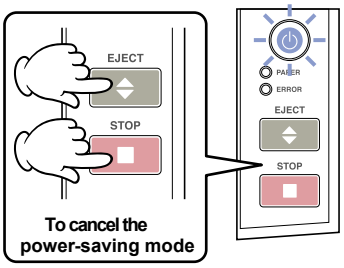


Checkpoint

After the scanner has been turned off, wait at least five seconds before turning it on again.

Notes on the power-saving mode

The scanner automatically switches to power-saving mode (the blue LED on the power button flashes) after approximately 12 minutes have elapsed without a document being loaded in the scanner. To return the scanner to normal status (Local status), press either the [STOP] or the [EJECT] key.



3.3 System Requirements

The minimum system requirements for running the scanner's hardware and software are listed below.

- Operating system: Windows 2000 Professional, XP Professional, or XP Home Edition
- CPU: Pentium III, 1 GHz
- Memory: 256 MB or more
- Monitor: 1024 x 768 pixels, True Color or higher
- Disk space: At least 10 GB*1
- Mouse
- Interface: USB 2.0 interface

**1 When the document length exceeds length of an A0-size document, additional hard disk space is required.*

Recommended environment

- CPU: Pentium 4, 2 GHz
- Memory: 1 GB or more
- Disk space: At least 30 GB
- USB 2.0 interface (that comes standard with your computer)

Checkpoint

Use with a system configuration below the recommended specifications will affect the scanning speed and prevent the scanner from operating to its specified capabilities. Moreover, colors may not be displayed correctly if the number of colors that the monitor can display is 256 or less.

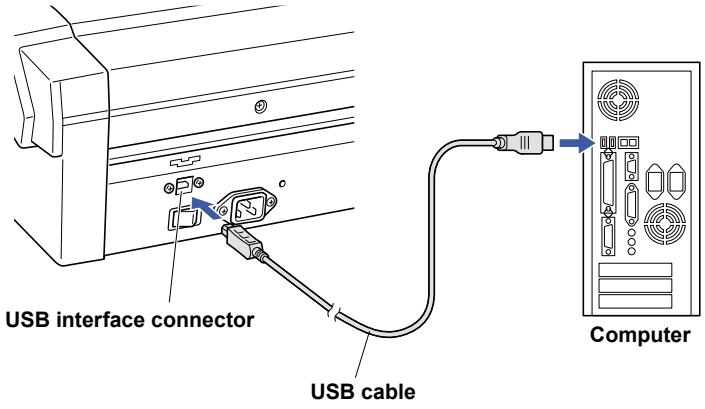
To edit an A1-size or larger grayscale document with a resolution of 400 dpi or higher, or a 24-bit color document, you may need more than the recommended memory sizes above.

3.4 Connecting the Scanner to a Computer

USB Connection

A USB cable is used to connect the scanner to the computer, via the respective USB interface connectors. The connectors at the computer and scanner ends of the USB cable have different shapes. Make sure that the cable is oriented correctly before making the connection.

Make sure that both the scanner and the computer are in the power-off status when connecting them.



Important

- Make sure that the USB cable is firmly inserted into the interface connectors.
- The operation of the scanner cannot be guaranteed in the following cases:
  - ♦ When the cable is connected to a USB hub or an add-on USB board.
  - ♦ When you are using a custom-built computer or one that you have modified.
- Do not perform any of the following actions:
  - ♦ Remove or reinsert the cable while you are installing the driver.
  - ♦ Remove or reinsert the cable while starting up the computer or the scanner.
  - ♦ Remove or reinsert the cable while transferring data.
  - ♦ Connect two or more scanners to a single computer.

Checkpoint

Please see the separate “Quick Start Guide” for the scanner driver installation procedure.

4. INSTALLING THE SOFTWARE

Checkpoint

The procedure outlined below is based on the requirement that you are logged on to Windows with administrator rights. Consult your Windows manual for more information.

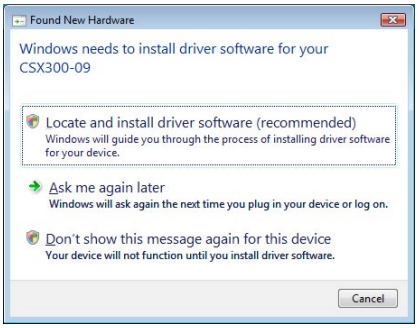
4.1 Installing the Driver Software for Windows Vista

(1) Use the USB cable to connect the scanner to the computer, and then turn on the computer.

(2) When Windows starts up, insert the CD-ROM supplied with the scanner into the CD-ROM drive. The “Start” screen opens automatically. Click the [Quit] button to close the “Start” screen.

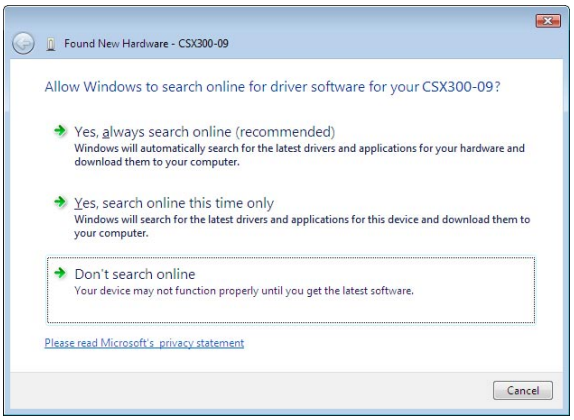
(3) Turn on the power to the scanner.

(4) The screen shown below is displayed. Click "Locate and install driver software (recommended)".

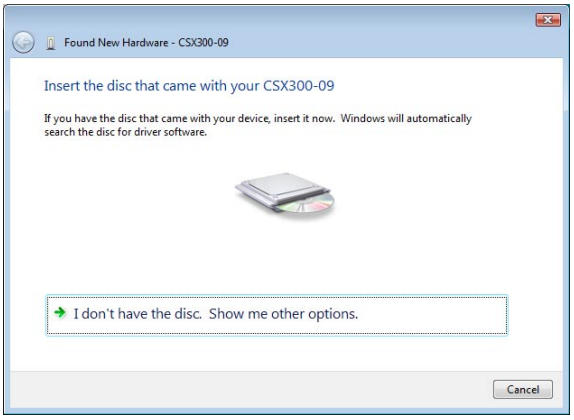

Found New Hardware
Windows needs to install driver software for your CSX300-09
Locate and install driver software (recommended)
Windows will guide you through the process of installing driver software for your device.
Ask me again later
Windows will ask again the next time you plug in your device or log on.
Don't show this message again for this device
Your device will not function until you install driver software.
Cancel

(5) The User Account Control screen is displayed. Click [Continue] to proceed with the installation.

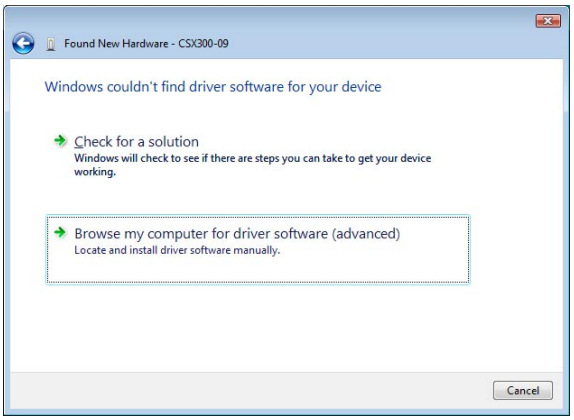
(6) The screen shown below is displayed. Click "Don't search online".


Found New Hardware - CSX300-09
Allow Windows to search online for driver software for your CSX300-09?
Yes, always search online (recommended)
Windows will automatically search for the latest drivers and applications for your hardware and download them to your computer.
Yes, search online this time only
Windows will search for the latest drivers and applications for this device and download them to your computer.
Don't search online
Your device may not function properly until you get the latest software.
Please read Microsoft's privacy statement
Cancel

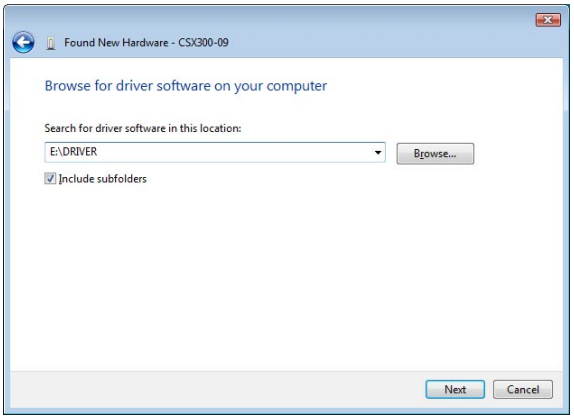
(7) The screen shown below is displayed. Click "I don't have the disc. Show me other options."


Found New Hardware - CSX300-09
Insert the disc that came with your CSX300-09
If you have the disc that came with your device, insert it now. Windows will automatically search the disc for driver software.
I don't have the disc. Show me other options.
Cancel

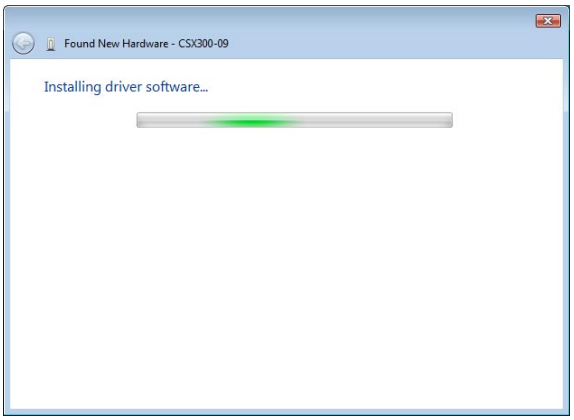
(8) The screen shown below is displayed. Click "Browse my computer for driver software (advanced)".


Found New Hardware - CSX300-09
Windows couldn't find driver software for your device
Check for a solution
Windows will check to see if there are steps you can take to get your device working.
Browse my computer for driver software (advanced)
Locate and install driver software manually.
Cancel

(9) The screen shown below is displayed. Click [Browse] and either select the [DRIVER] folder in the CD-ROM drive or enter a CD-ROM drive name and \DRIVER using the keyboard.
Example: For drive E, enter "E:\DRIVER".



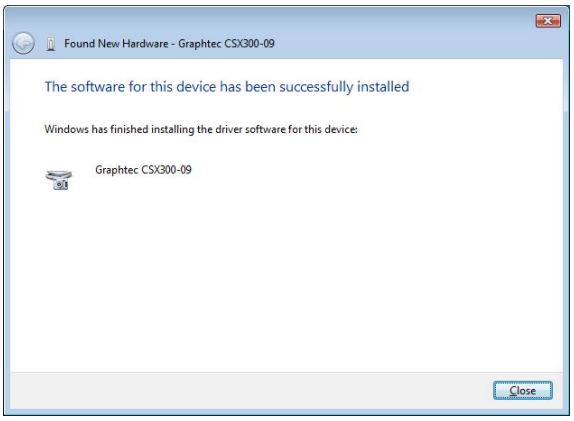
(10) Click [Next]. The wizard will start searching for the driver.



(11) The screen shown below is displayed. Click [Install] to proceed with the installation.

Windows Security
Would you like to install this device software?
Name: Graphtec Imaging devices
Publisher: Graphtec Corporation
Always trust software from "Graphtec Corporation".
Install
Don't Install
You should only install driver software from publishers you trust. How can I decide which device software is safe to install?

(12) The screen shown below is displayed when the wizard has finished installing the driver.
Click the [Close] button to close the "Found New Hardware" wizard.


Found New Hardware - Graphtec CSX300-09
The software for this device has been successfully installed
Windows has finished installing the driver software for this device:
Graphtec CSX300-09
Close

(13) The Windows Vista desktop appears, and the scanner is recognized by the computer.

4.2 Installing the Driver Software for Windows XP

(1) Use the USB cable to connect the scanner to the computer, and then turn on the computer.

(2) When Windows starts up, insert the CD-ROM supplied with the scanner into the CD-ROM drive. The "Start" screen opens automatically. Click the [Quit] button to close the "Start" screen.

(3) Turn on the power to the scanner.

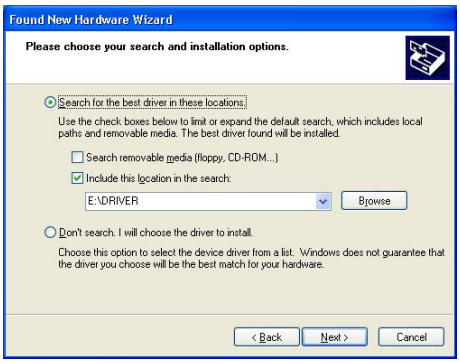
(4) When Windows XP starts up, the following screen appears (if Service Pack 2 has not been installed, the screen shown in (5) below appears). Select the option "No, not this time" and then click [Next].

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).
Read our privacy policy
Can Windows connect to Windows Update to search for software?
Yes, this time only
Yes, now and every time I connect a device
No, not this time
Click Next to continue.
< Back
Next >
Cancel

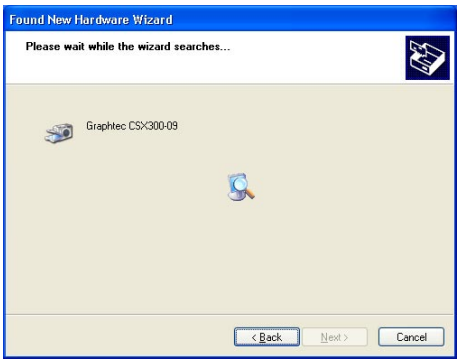
(5) If Service Pack 2 has not been installed, the following screen appears. Select the option "Install from a list or a specific location (Advanced)." and then click [Next].

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install software for:
Graphtec CSX300-09
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

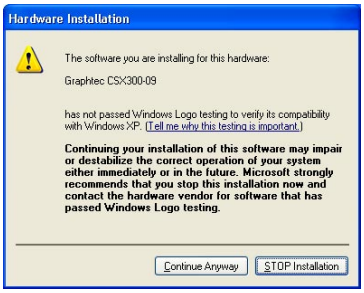
(6) The screen shown below is displayed. Select the option "Search for the best driver in these locations" and select the check box entitled "Include this location in the search."
Click [Browse] and select the [English]-[DRIVER]-[SCANNER] folders in the CD-ROM drive or enter a CD-ROM drive name and \English\DRIVER\SCANNER using the keyboard.
Example: For drive D, enter "D:\English\DRIVER\SCANNER".


Found New Hardware Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
E:\DRIVER
Browse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back
Next >
Cancel

(7) Click [Next]. The wizard will start searching for the driver.



(8) The screen shown below is displayed. Read the explanation and make sure that you understand the contents.
To continue the installation, click [Continue Anyway].


Hardware Installation
The software you are installing for this hardware:
Graphtec CSX300-09
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

(9) The screen shown below is displayed when the wizard has finished installing the driver.
Click the [Finish] button to close the “Welcome to the Found New Hardware” wizard.

(10) The Windows XP desktop appears, and the scanner is recognized by the computer.

4.3 Installing the Driver Software for Windows 2000

(1) Use the USB cable to connect the scanner to the computer, and then turn on the computer.

(2) When Windows starts up, insert the CD-ROM supplied with the scanner into the CD-ROM drive. The "Start" screen opens automatically. Click the [Quit] button to close the "Start" screen.

(3) Turn on the power to the scanner.

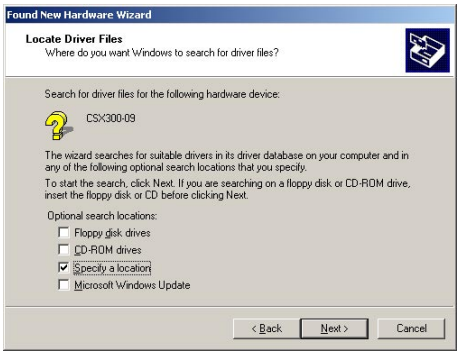
(4) The screen shown below appears. Click [Next] to move to the "Install Hardware Device Drivers" screen.

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install a device driver for a hardware device.
To continue, click Next.
< Back
Next >
Cancel

(5) When this screen is displayed, select the option "Search for a suitable driver for my device (recommended)" and then click [Next] to display the "Locate Driver Files" screen.

Found New Hardware Wizard
Install Hardware Device Drivers
A device driver is a software program that enables a hardware device to work with an operating system.
This wizard will complete the installation for this device:
CSX300-09
A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.
What do you want the wizard to do?
Search for a suitable driver for my device (recommended)
Display a list of the known drivers for this device so that I can choose a specific driver
< Back
Next >
Cancel

(6) When this screen is displayed, select the check box entitled "Specify a location" and click [Next].


Found New Hardware Wizard
Locate Driver Files
Where do you want Windows to search for driver files?
Search for driver files for the following hardware device:
CSX300-09
The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify.
To start the search, click Next. If you are searching on a floppy disk or CD-ROM drive, insert the floppy disk or CD before clicking Next.
Optional search locations:
Floppy disk drives
CD-ROM drives
Specify a location
Microsoft Windows Update
< Back
Next >
Cancel

(7) The following screen is displayed. Click [Browse] and select the [English]-[DRIVER]- [SCANNER] folders in the CD-ROM drive or enter a CD-ROM drive name and \English\DRIVER\SCANNER using the keyboard.

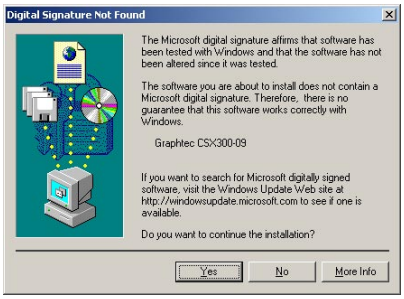
Example: For drive D, enter "D:\English\DRIVER\SCANNER".

Click [OK]. The wizard will start searching for the driver.

(8) The screen shown below is displayed when the wizard has finished searching. Click [Next].

Found New Hardware Wizard
Driver Files Search Results
The wizard has finished searching for driver files for your hardware device.
The wizard found a driver for the following device:
CSX300-09
Windows found a driver for this device. To install the driver Windows found, click Next.
e:\driver\gtcscan.inf
< Back
Next >
Cancel

(9) The screen shown below is displayed. Read the explanation and make sure that you understand the contents.
To continue the installation, click [Yes].

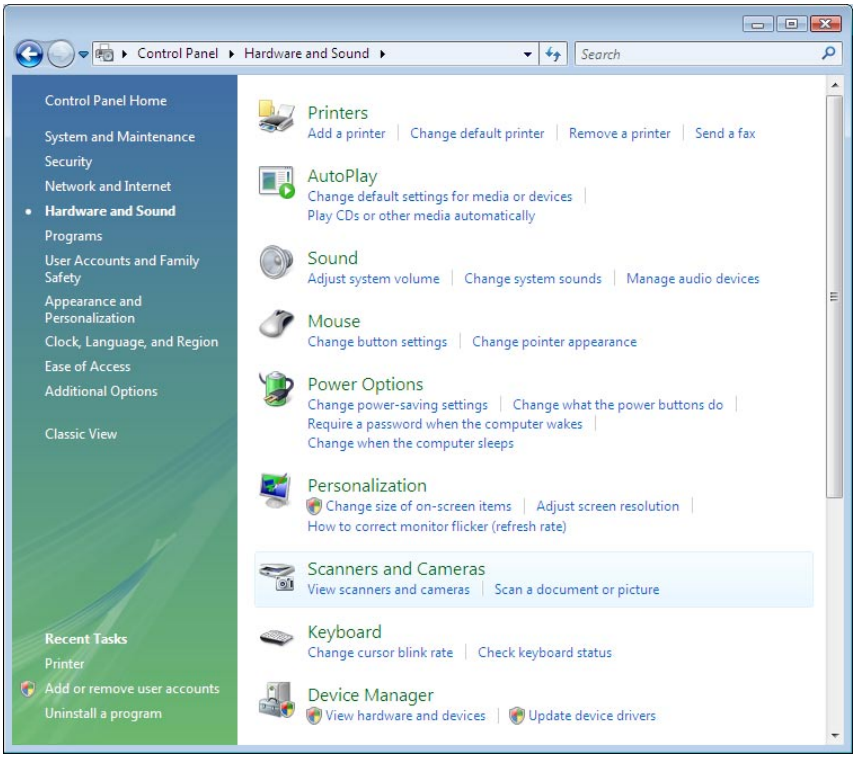

Digital Signature Not Found
The Microsoft digital signature affirms that software has been tested with Windows and that the software has not been altered since it was tested.
The software you are about to install does not contain a Microsoft digital signature. Therefore, there is no guarantee that this software works correctly with Windows.
Graphtec CSX300-09
If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com to see if one is available.
Do you want to continue the installation?
Yes
No
More Info

(10) The screen shown below is displayed when the wizard has finished installing the driver.
Click the [Finish] button.

(11) The Windows 2000 desktop appears, and the scanner is recognized by the computer.

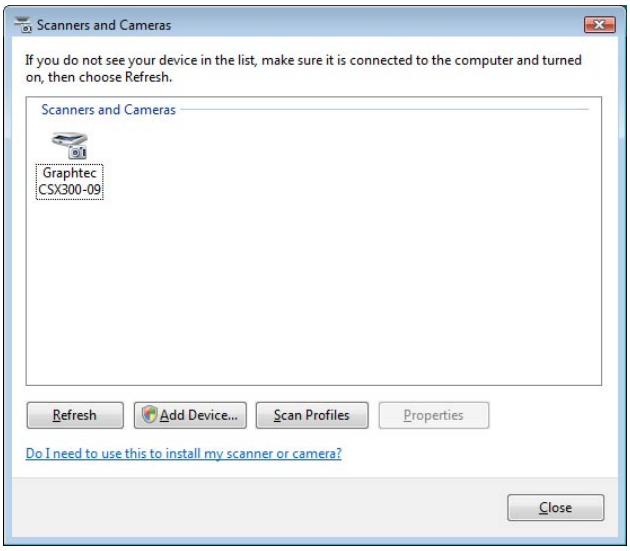
4.4 Checking the Interface Connection for Windows Vista

(1) Launch the Control Panel using the [Start] menu on the Windows desktop.


Control Panel ▸ Hardware and Sound ▸
Search
Control Panel Home
System and Maintenance
Security
Network and Internet
Hardware and Sound
Programs
User Accounts and Family Safety
Appearance and Personalization
Clock, Language, and Region
Ease of Access
Additional Options
Classic View
Recent Tasks
Printer
Add or remove user accounts
Uninstall a program
Printers
Add a printer | Change default printer | Remove a printer | Send a fax
AutoPlay
Change default settings for media or devices
Play CDs or other media automatically
Sound
Adjust system volume | Change system sounds | Manage audio devices
Mouse
Change button settings | Change pointer appearance
Power Options
Change power-saving settings | Change what the power buttons do
Require a password when the computer wakes
Change when the computer sleeps
Personalization
Change size of on-screen items | Adjust screen resolution
How to correct monitor flicker (refresh rate)
Scanners and Cameras
View scanners and cameras | Scan a document or picture
Keyboard
Change cursor blink rate | Check keyboard status
Device Manager
View hardware and devices | Update device drivers

(2) Click "Hardware and Sound" to display the screen shown below.

(3) Click "Scanners and Cameras" to display the screen shown below.

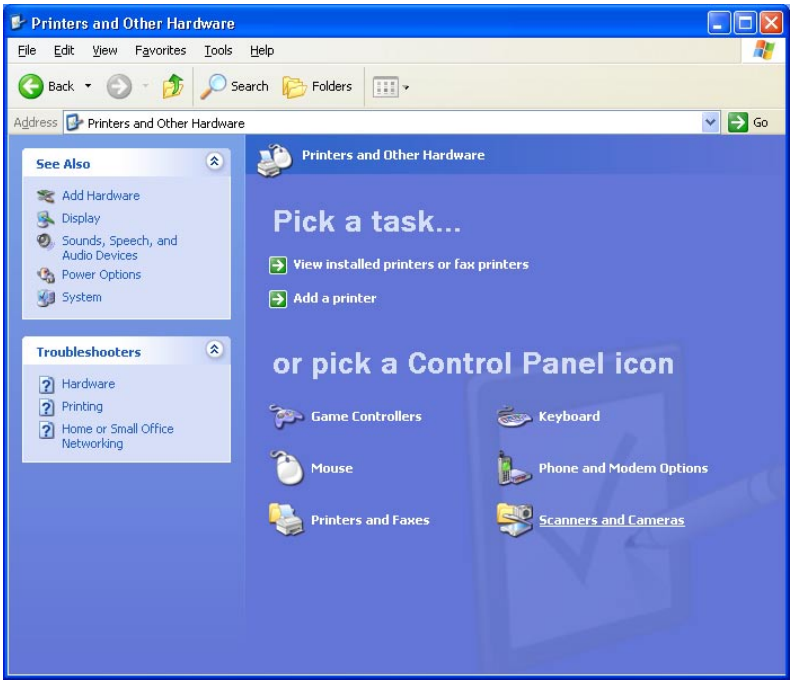

Scanners and Cameras
If you do not see your device in the list, make sure it is connected to the computer and turned on, then choose Refresh.
Scanners and Cameras
Graphtec CSX300-09
Refresh
Add Device...
Scan Profiles
Properties
Do I need to use this to install my scanner or camera?
Close

Check that "Graphtec CSX300-09" is displayed here.

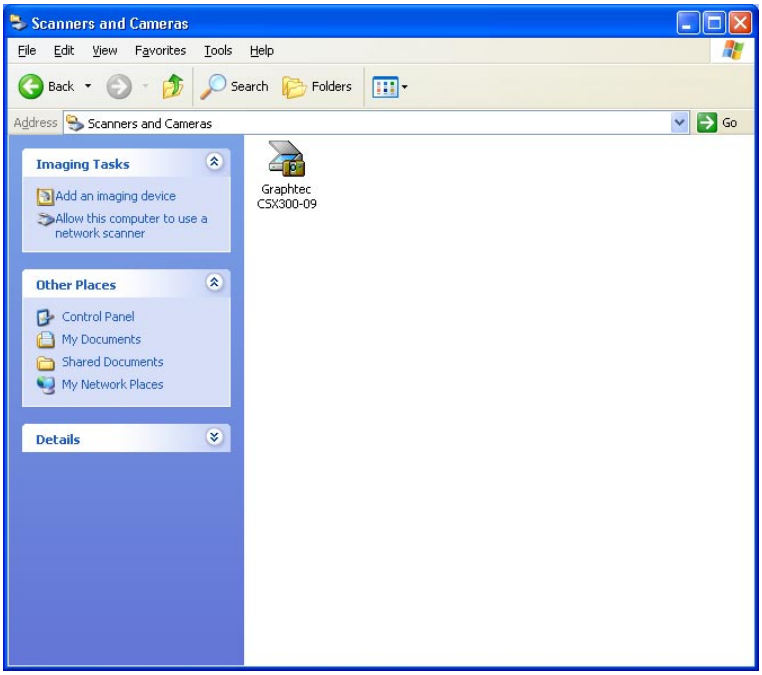
4.5 Checking the Interface Connection for Windows XP

(1) Launch the Control Panel using the [Start] menu on the Windows desktop.

(2) The screen shown below is displayed when you click on the “Printers and Other Hardware” icon.

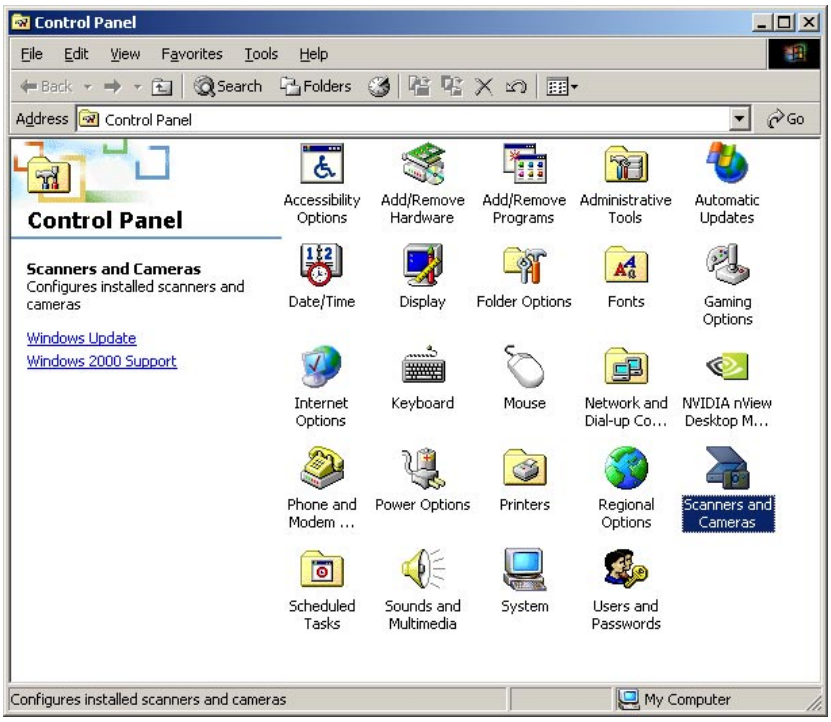


(3) The screen shown below is displayed when you click on the “Scanners and Cameras” icon.

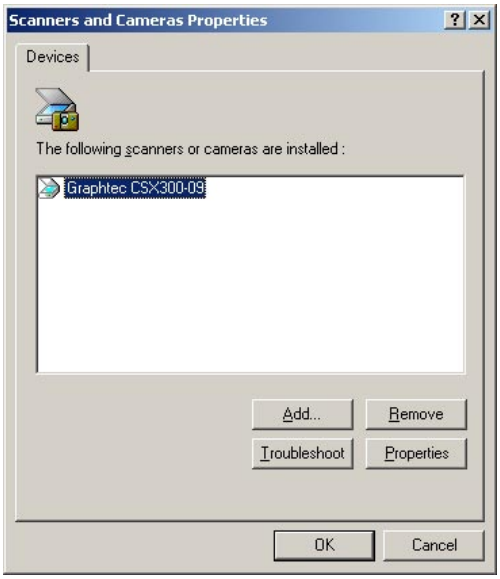


4.6 Checking the Interface Connection for Windows 2000

(1) Launch the Control Panel using the [Start] menu on the Windows desktop.



(2) The screen shown below is displayed when you click on the “Scanners and Cameras” icon.



Check that “Graphtec CSX300-09” is displayed here.

4.7 Installing the Scanning Master 21+ Application

The Scanning Master 21+ “OPS112” is a software application for using a Graphtec scanner to scan image data.

Operating Environment

Windows 2000 Professional, XP Professional, XP Home Edition or Vista

Installation Procedure

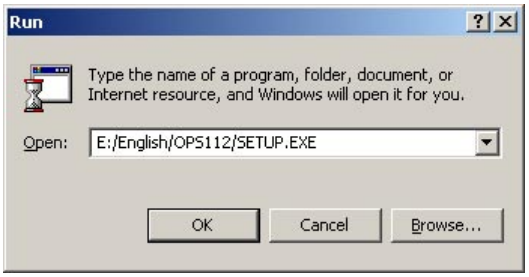
(The following steps are explained using the Windows 2000 windows.)

(1) Start up Windows 2000.

(2) Insert the CD-ROM supplied with the scanner into the CD-ROM drive.

(3) Select "Run" from the [Start] menu on the Windows desktop.

(4) Enter the CD-ROM drive name and English\OPS112\SETUP.EXE as the name of the file you wish to open.
If the disk is in drive E, for example, enter **“E:\English\OPS112\SETUP.EXE”** in the box.



(5) Click the OK button to run the OPS112 setup program. From this point on, follow the setup program’s instructions to install the OPS112 application.

• If the application has been properly installed, **“Scanning Master 21+”** will be newly listed in the Programs menu accessed from the Start button.

TIP

For more details, open the README.TXT file provided in the “Scanning Master 21+” folder.

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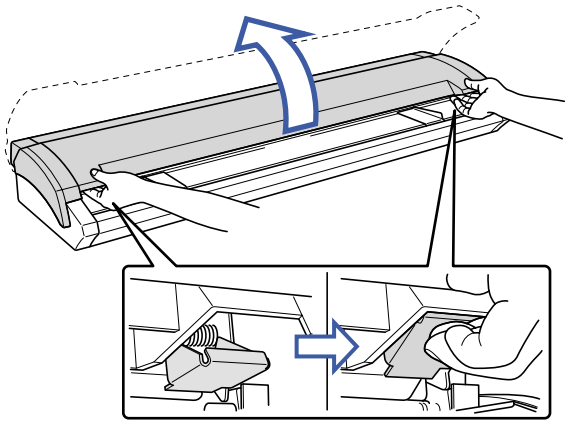
5. DAILY MAINTENANCE

5.1 Opening and Closing the Top Cover

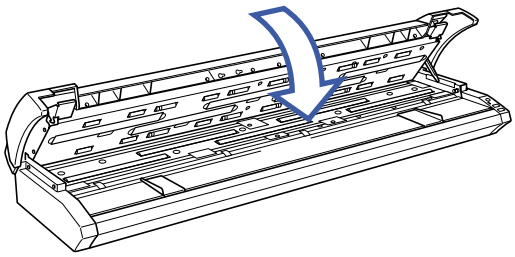
Opening the top cover

(1) Turn off the scanner.
(2) Using both hands, push up the left and right open levers on the top cover to unlock them. While still holding on to the levers, open the cover fully (approximately 47 degrees).
(3) When the top cover is fully open, the fixing stay operates to hold the top cover in place.



Closing the top cover

(1) Press the open cover down gently with both hands to close it.
(2) Check that the left and right open levers are locked into position.

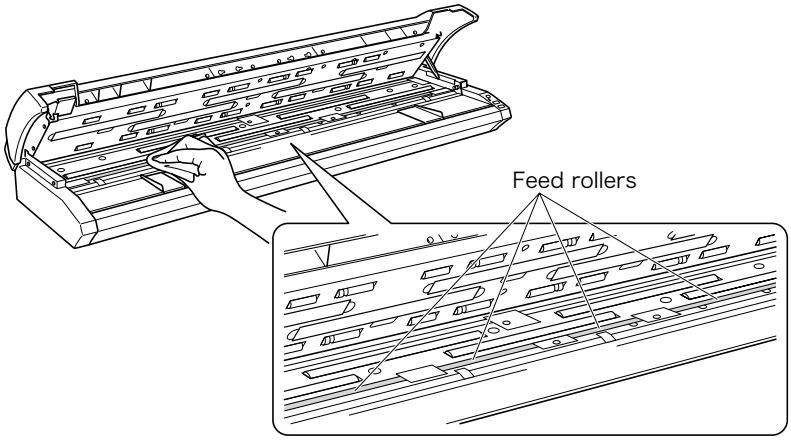


⚠Caution

- Take care not to get your fingers caught when opening or closing the cover.
- If the levers are not locked correctly, the ERROR LED flashes and a scanning operation cannot be performed.

5.2 Cleaning the Feed Rollers

(1) Turn off the scanner.
(2) Open the top cover as described in Section 5.1, “Opening and Closing the Top Cover”.
(3) While rotating the feed rollers, wipe them clean using a soft cloth that has been moistened with water or a neutral detergent (diluted with water) and firmly wrung out.



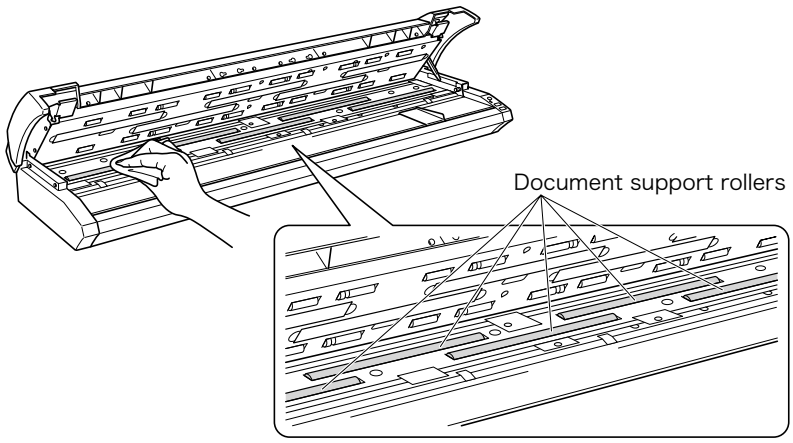
(4) Wipe the feed rollers once again using a soft, dry cloth to remove all the moisture.
(5) Close the top cover as described in Section 5.1, “Opening and Closing the Top Cover”.

⚠Caution

• Take care not to get your fingers caught in the top cover.

5.3 Cleaning the Document support Rollers

(1) Turn off the scanner.
(2) Open the top cover as described in Section 5.1, “Opening and Closing the Top Cover”.
(3) While rotating the document support rollers, wipe them clean using a soft cloth that has been moistened with water or a neutral detergent (diluted with water) and firmly wrung out.



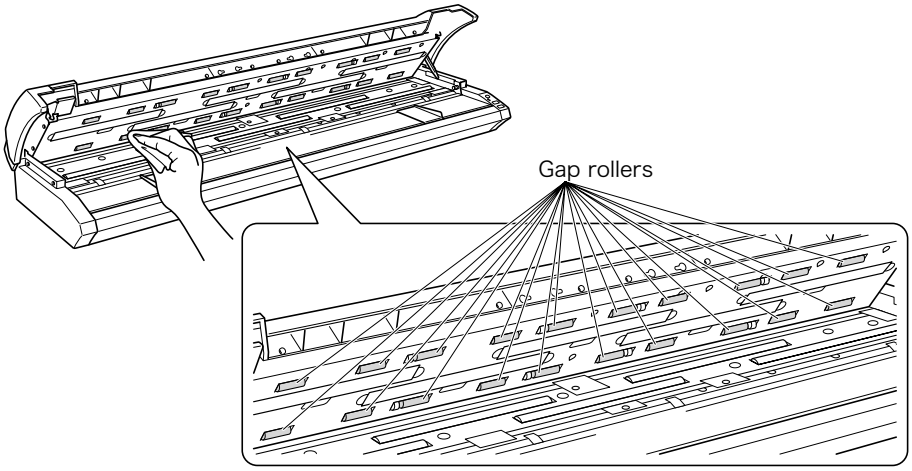
(4) Wipe the document support rollers once again using a soft, dry cloth to remove all the moisture.
(5) Close the top cover as described in Section 5.1, “Opening and Closing the Top Cover”.

⚠Caution

- Take care not to get your fingers caught in the top cover.
- Scanning may be affected if the document support rollers becomes scratched or dirty.

5.4 Cleaning the Gap Rollers

(1) Turn off the scanner.
(2) Open the top cover as described in Section 5.1, “Opening and Closing the Top Cover”.
(3) While rotating the gap rollers, wipe them clean using a soft cloth that has been moistened with water or a neutral detergent (diluted with water) and firmly wrung out.



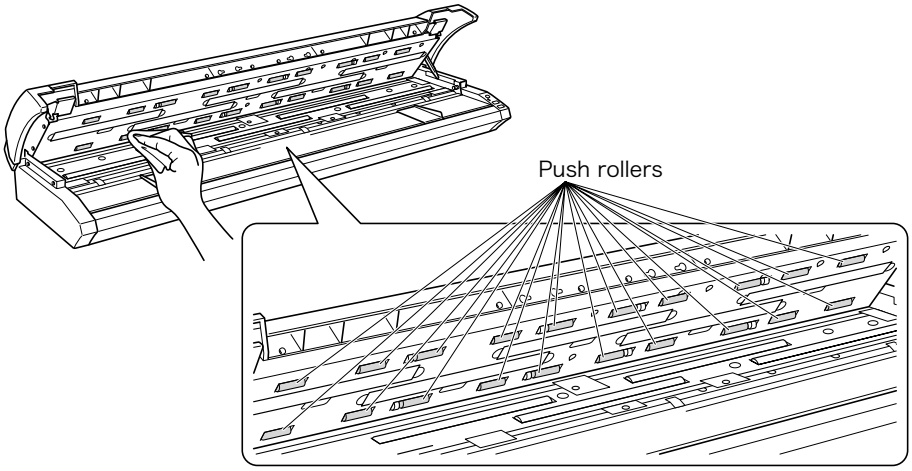
(4) Wipe the gap rollers once again using a soft, dry cloth to remove all the moisture.
(5) Close the top cover as described in Section 5.1, “Opening and Closing the Top Cover”.

⚠Caution

• Take care not to get your fingers caught in the top cover.

5.5 Cleaning the Push Rollers

(1) Turn off the scanner.
(2) Open the top cover as described in Section 5.1, “Opening and Closing the Top Cover”.
(3) While rotating the push rollers, wipe them clean using a soft cloth that has been moistened with water or a neutral detergent (diluted with water) and firmly wrung out.



(4) Wipe the push rollers once again using a soft, dry cloth to remove all the moisture.
(5) Close the top cover as described in Section 5.1, “Opening and Closing the Top Cover”.

⚠Caution

• Take care not to get your fingers caught in the top cover.

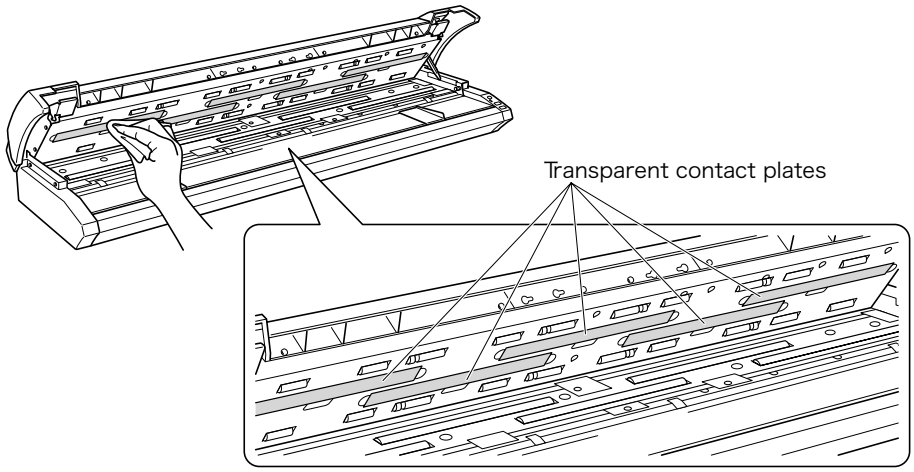
5.6 Cleaning the Image Sensors (Contact glass plates)

The scanner's image quality drops when the contact glass plates over the image sensors become dirty, so clean the image sensors whenever necessary.

(1) Turn off the scanner.

(2) Open the top cover as described in Section 5.1, "Opening and Closing the Top Cover".

(3) As shown below, wipe off any soiled areas on the contact glass plates using a soft cloth that has been moistened with water or a neutral detergent (diluted with water) and firmly wrung out.



(4) Wipe the contact glass plates once again using a soft, dry cloth to remove all the moisture.

(5) Close the top cover as described in Section 5.1, "Opening and Closing the Top Cover".

⚠Caution

- Take care not to get your fingers caught in the cover.
- Do not use a commercial cleaner for office equipment, a glass cleaner, or chemical solvents such as solutions containing alcohol. Moreover, although the contact glass plates is not a maintenance part that requires periodic replacement, it is a consumable part because its surface may receive slight scratches due to minute particles of dust and other foreign matter. If document scanning produces unsatisfactory results (unexpected white or black streaks in the data) due to scratches on one or more of the contact glass plates or other reasons, please perform the calibration procedure (see Section 5.9, "Scanner Calibration"). If the scanning results do not improve after calibration, the contact glass plate(s) will need to be replaced.

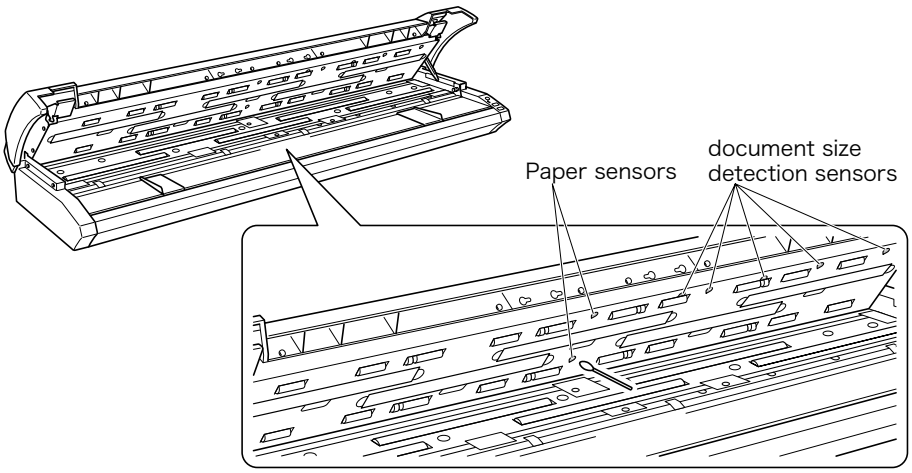
5.7 Cleaning the Media sensors

Accumulated dust on the paper sensors or on the document size detection sensors may prevent the document from being scanned correctly. The sensors must be cleaned when necessary.

(1) Turn off the scanner.

(2) Open the top cover as described in Section 5.1, “Opening and Closing the Top Cover”.

(3) Wipe the media sensors (at the front and rear) using a cotton swab.



(4) Close the top cover as described in Section 5.1 “Opening and Closing the Top Cover”.

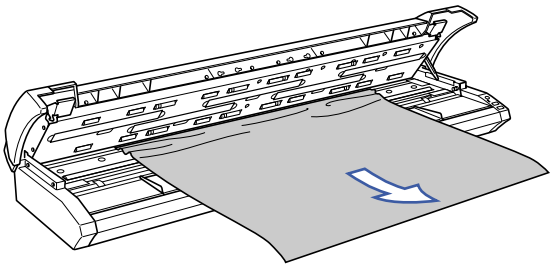
⚠Caution

- Take care not to get your fingers caught in the top cover.
- Use a cotton swab or something equally soft to gently wipe the media sensors.
  Do not use any chemicals to clean the sensors.

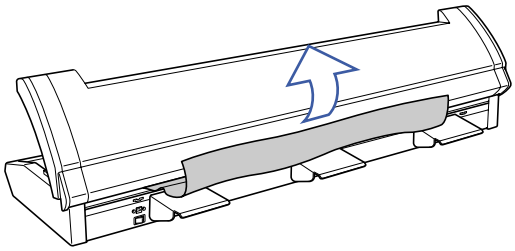
5.8 Removing a Jammed Document

If a document becomes jammed in the scanner during scanning or another operation, follow the procedure described below to remove the jammed document.

(1) Turn off the scanner.
(2) Open the top cover as described in Section 5.1 “Opening and Closing the Top Cover”.
(3) If the document is jammed at the front, remove the document from the inside by pulling it forward.



(4) If the document is jammed at the rear, remove the document by pulling it out along the rear guides.



(5) Close the top cover as described in Section 5.1, “Opening and Closing the Top Cover”.

⚠Caution

- Take care not to get your fingers caught in the top cover.
- When removing a jammed document, pull on it gently to prevent damage to the document.

5.9 Scanner Calibration

Calibrate the scanner if scanning quality is observed to deteriorate, with scanned results such as those described below

- The scanned image is distorted
- Areas of uneven color appear in the scanned image
- Other unsatisfactory results (but excluding problems related to media quality, such as folds, creases, or paper curl)

Preparation and checks

Recommended usage environment

- Monitor: 1024 x 768 pixels, High Color or better resolution

---

Checkpoint

A low-resolution monitor will make it difficult to discern any problem areas.

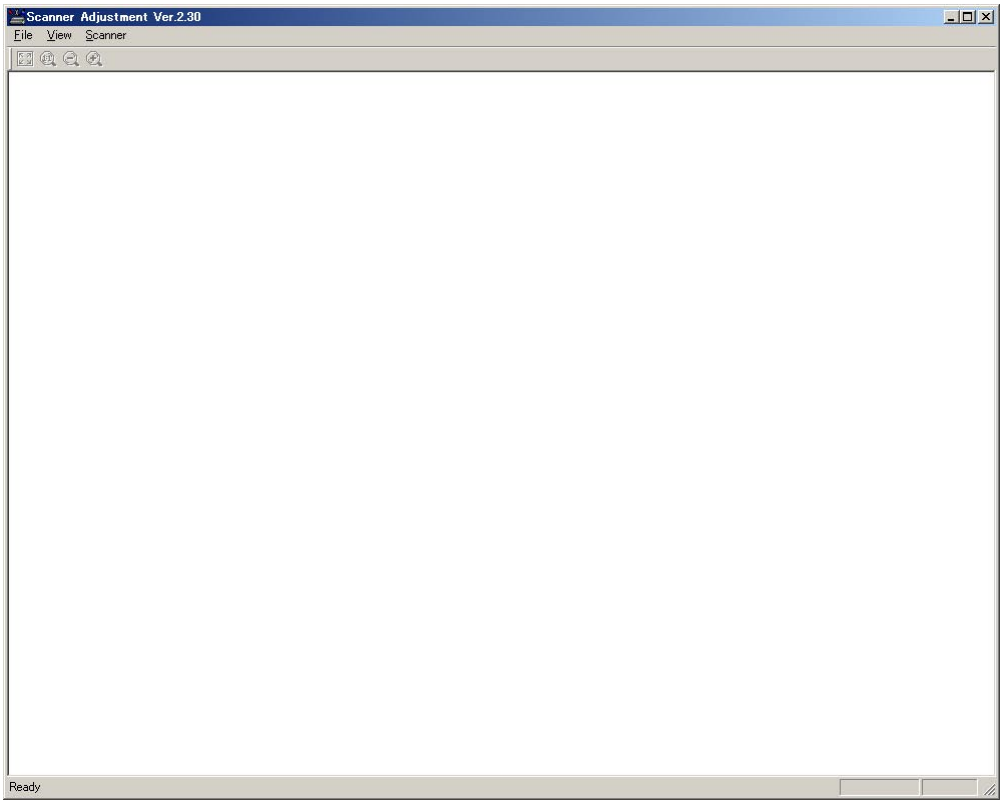
Launching the Scanner Adjustment Program

(1) Connect the scanner to the computer, turn on the scanner, and then turn on the computer.

(2) Install the Scanning Master 21+ “OPS112” software if it is not already installed.

(3) Click the [Start] button on the Windows desktop, then select Programs > Scanning Master 21+ > Scanner Adjustment.

(4) Click Scanner Adjustment to launch the Scanner Adjustment program.



(5) Select the desired adjustment item from the Scanner menu.

Calibration

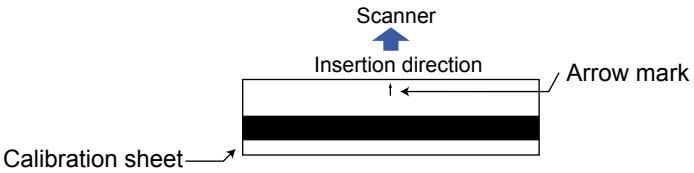
Before beginning calibration, clean the contact glass plates located inside the scanner and the surface of the document-scanning table. Any dust or dirt on these surfaces may affect the calibration results and the resulting image quality.
Check that the calibration sheet is free of any dust or dirt.

⚠Caution

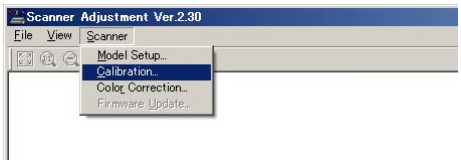
- The calibration procedure will take some time. Do not turn off the scanner while calibration is underway. Accidentally turning off the scanner may result in damage that requires servicing.
- Handle the calibration sheet with care so that it does not get bent. To prevent soiling, store it in its special storage box.
- The calibration sheet is a consumable item. It cannot be used if it is bent or soiled.
- The calibration sheet is a paper product. Do not attempt to clean it with any type of liquid cleaner.

Checkpoint

A prompt instructing you to insert the calibration sheet in the scanner will be displayed in Step 3. At that time, insert the calibration sheet as instructed, with the arrow at the top, as shown in the diagram below.



(1) Launch the Scanner Adjustment program (as described earlier), and then display the Scanner menu.



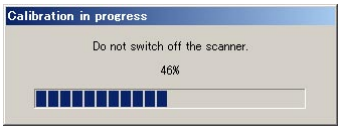
Select Calibration on the Scanner menu.

(2) Select All in Calibration and click the [Execute] button.

(3) The following prompt is displayed. Insert the calibration sheet into the scanner as instructed.

Scanner Adjustment Ver.2.30
This will perform calibration.
Insert the calibration sheet into the scanner.Position so that the arrow is at the top.
Calibration will take some time.
OK
キャンセル

(4) Click the [OK] button to begin calibration.



(5) Calibration ends after approximately 10 minutes.

Click the [OK] button to complete calibration.

(6) To check the calibration results, click the [Confirm] button in the Calibration screen (shown in step (2) above).

(7) The following prompt is displayed. Insert the calibration sheet into the scanner once again as instructed.

Scanner Adjustment Ver.2.30
Scanning will be performed to verify calibration.
Insert the calibration sheet into the scanner. Position so that the arrow is at the top.
OK
キャンセル

(8) Click the [OK] button to start scanning.
The scanned data is displayed when scanning is complete. Colors may differ slightly for individual sensors to make it easier to identify problem areas in calibration. This does not indicate a defect.
Check that there are no vertical streaks, such as white patches, in the scanned data.
(Streaks occur when calibration is not performed correctly due to contamination by dust or dirt.)

(9) If the data is normal, calibration is complete. Click the [Close] button and exit the Scanner Adjustment Program.

(10) If any abnormal data is observed, specify the problem areas as follows:
Select Calibration from the Scanner menu, and then select Specified Part in the Calibration screen.

(11) The mouse arrow cursor changes to a cross cursor when moved over the data. Click the left mouse button with the mouse positioned over the streak data. The selected area is shown in blue. Repeat this procedure for any additional streaks.
Areas that have been selected (shown in blue) can be deselected by clicking the left mouse button again. To deselect all selected areas, click the [Clear] button.

(12) Once all the required areas have been specified, remove the calibration sheet and clean the contact glass plates and document-scanning table surface. Check the calibration sheet for dust and dirt.

(13) Click the [Execute] button and then follow the instructions displayed on the screen. The procedure will be the same as that described in Steps (3) to (5) above. (The time required for calibration will vary according to the number of repeats specified.)

(14) Perform Steps (8) to (10) once more, and verify the calibration results.

6. RECOMMENDED PARTS LIST

No.	Part No.	Part Name	Description	Q'ty	Remarks	RL
1	444063050	SVC_Main_BD_S	Main Board	1		A
2	444063100	SVC_CIS_BD	CIS Control Board	5		A
3	444063080	SVC_PWR_BD	CIS Power Board	1		A
4	444063600	Cover_Assy R	With Control Panel Relay Board	1		B
5	444063820	Scan_Glass_A	Contact Glass Plate Assy	5		A
6	444063891	Calibration Sheet (IS0925)	IS0925 (Ordered by this options model name)	1		A
7	641710000	Feed_Roller_F	Front Feed Roller	1		B
8	641710010	Feed_Roller_R	Rear Feed Roller	1		B
9	444063720	Pinch_Roller_A	Pinch Roller Assy	20		B
10	561080004	Media_Sensor	PS117ED1	7		B
11	311012820	Press_Roller_A	Document Roller Assy	1		B
12	694450111	FPC_Cable	FPC, CS20A, CIS to CIS B	5		A
13	561080012	Cover_Sensor	KI139 1-AALF	2		B
14	444063900	CIS Sensor A, (Rank A)	Select the same rank of sensor that is used in your scanner.	5		A
	444063910	CIS Sensor B, (Rank B)				
	444063920	CIS Sensor C, (Rank C)				
	444063930	CIS Sensor D, (Rank D)				
	444063940	CIS Sensor E, (Rank E)				
	444063950	CIS Sensor F, (Rank F)				
	444063960	CIS Sensor G, (Rank G)				
	444063970	CIS Sensor H, (Rank H)				
	444063980	CIS Sensor I, (Rank I)				
	444063990	CIS Sensor J, (Rank J)				
	444064000	CIS Sensor K, (Rank K)				
	444064010	CIS Sensor L, (Rank L)				
	444064020	CIS Sensor M, (Rank M)				
	444064030	CIS Sensor N, (Rank N)				
	444064040	CIS Sensor O, (Rank O)				
	444064050	CIS Sensor P, (Rank P)				

7. LIST OF JIGS AND TOOLS

7.1 Jigs

Jigs	Adjustments	Remarks
CSX300-09 firmware	•Downloading system program	Firmware (CSX300.X)
Scanning Master 21+ (Ver. 6.60 or later)	•Downloading system program •Shading (white & black correction) •Adjusting feed distance •Aligning sensor images •Adjusting offset	Software supplied with the scanner (Scanning Master 21+)
Calibration sheet	•Shading (white & black correction)	Standard accessory 1050 mm x 200 mm
Adjustment test chart for CSX300	•Adjusting feed distance •Adjusting offset •Aligning sensor images	Record measured values between C010 and C090.
Auto adjustment chart	•Aligning sensor images	Auto adjustment chart

7.2 Tools

Tools	Usage	Remarks
Screwdriver Allen wrench (2 mm to 4 mm) Needle-nose pliers	Disassembly, reassembly, and other operations	Large, medium, and small flat blade screwdrivers and Phillips screwdrivers

7.3 Other

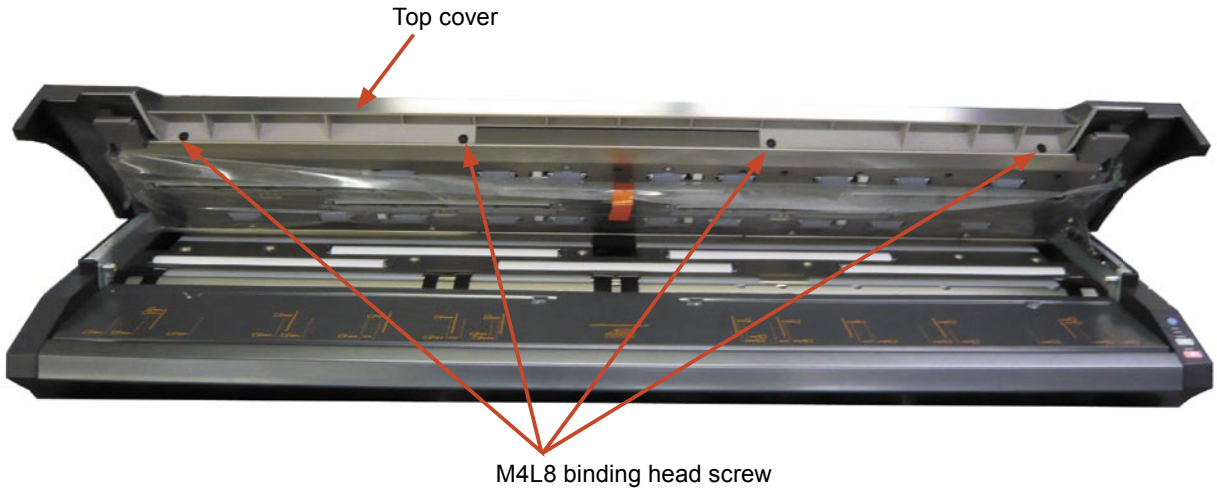
Item	Usage	Remarks
Water-diluted neutral detergent or absolute ethanol wiper (cloth)	Cleaning	
PC USB cable	Used to determine whether the problem is caused by the scanner or other equipment.	

8. DISASSEMBLING AND ADJUSTING THE MECHANICAL PARTS

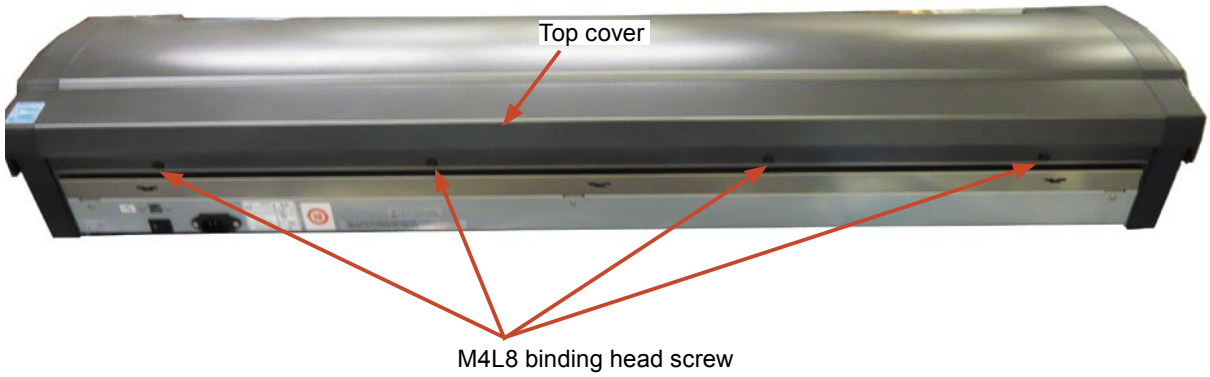
8.1 Top Cover

Detaching the top cover

(1) Remove the four M4L8 binding head screws on the front side of the top cover.



(2) Remove the four M4L8 binding head screws on the rear side of the top cover.



(3) Detach the top cover from the scanner unit in the upward direction.

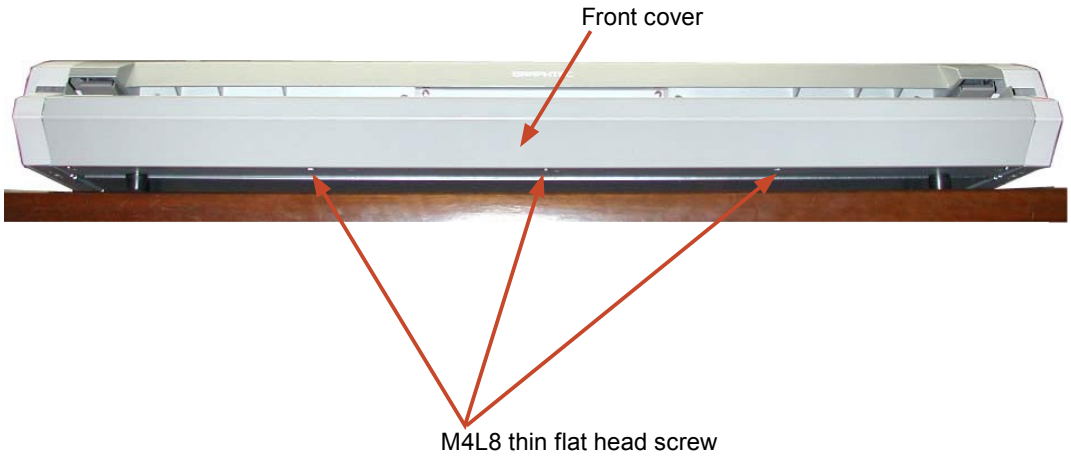
Reattaching the top cover

(1) Reattach the top cover in the reverse order in which it was detached.

8.2 Front Cover

Detaching the front cover

(1) Remove the three M4L8 thin flat head screws holding the front cover.



(2) Pull out the front cover from the scanner unit.

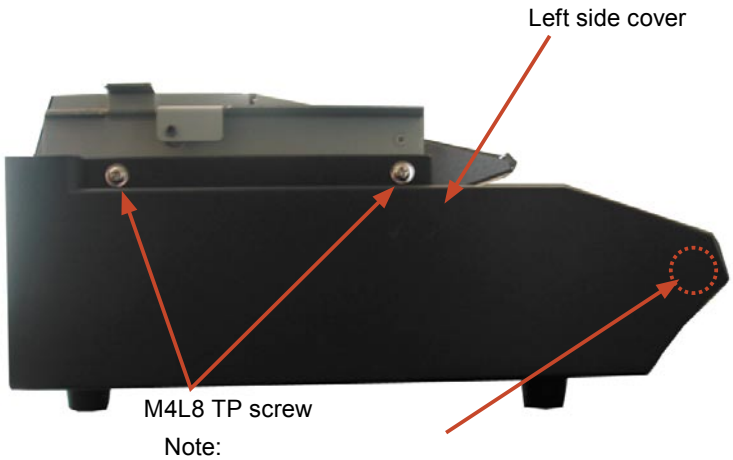
Reattaching the front cover

(1) Reattach the front cover in the reverse order in which it was detached.

8.3 Left Side Cover

Detaching the left side cover

(1) Detach the top cover (see Section 8.1).
(2) Detach the front cover (see Section 8.2).
(3) Remove the two M4L8 TP screws on the left side of the scanner unit.
(4) Detach the left side cover.



Note:
There is a positioning pillar inside the left side cover.
Do not twist the cover when removing the cover.
Otherwise, you will break the positioning pillar.

Reattaching the left side cover

(1) Reattach the left side cover in the reverse order in which it was detached.

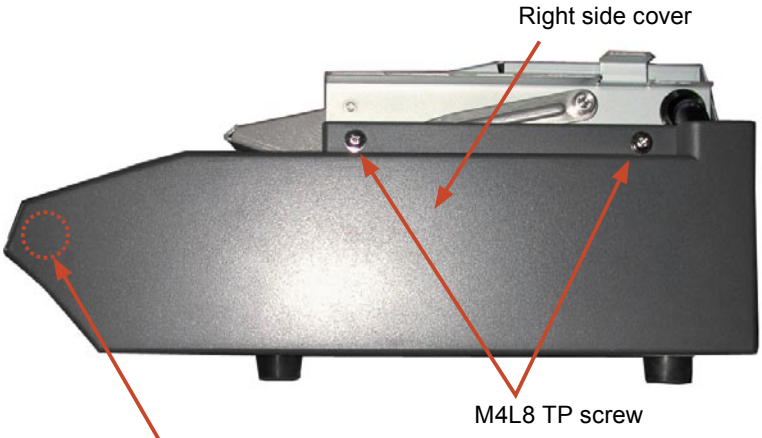
8.4 Right Side Cover

Detaching the right side cover

(1) Detach the top cover (see Section 8.1).

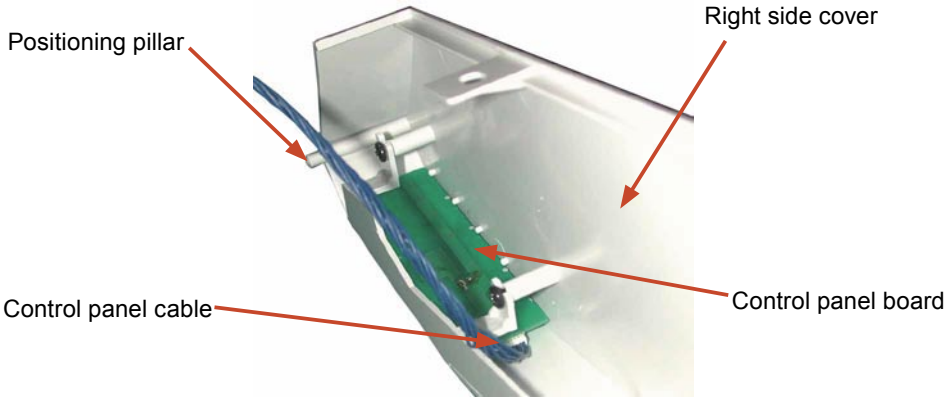
(2) Detach the front cover (see Section 8.2).

(3) Remove the two M4L8 TP screws on the right side of the scanner unit.



Note:
There is a positioning pillar inside the right side cover.
Do not twist the cover when removing the cover.
Otherwise, you will break the positioning pillar.

(2) Disconnect the control panel cable from the control panel board.



(3) Detach the right side cover.

Reattaching the right side cover

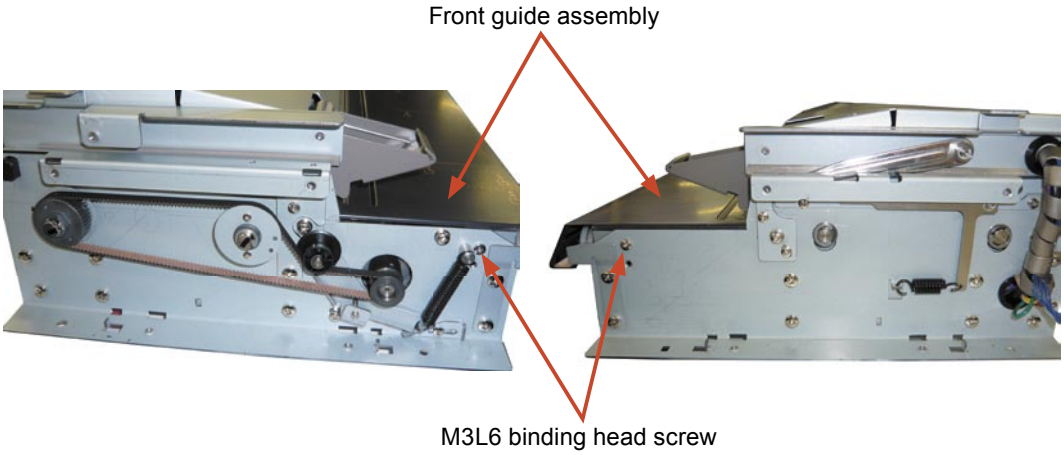
(1) Reattach the right side cover in the reverse order in which it was detached.

8.5 Front Guide Assembly

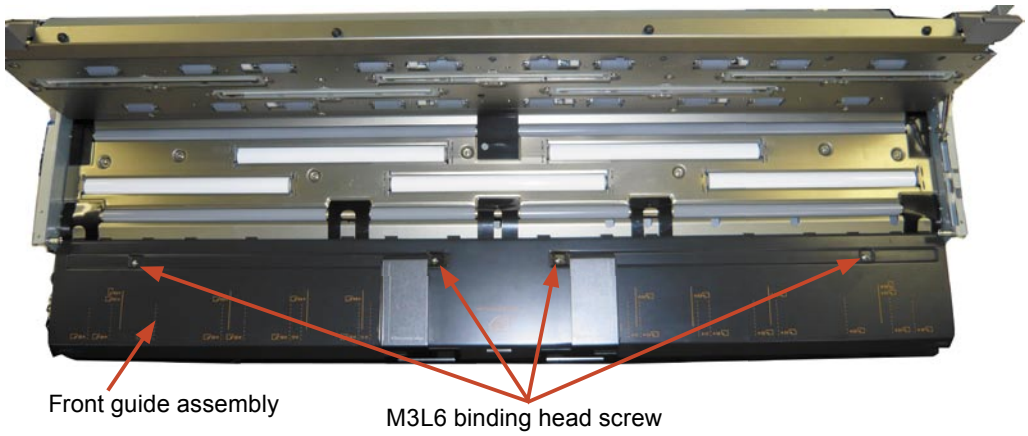
Detaching the front guide assembly

(1) Detach the top, front, left side and right covers (see Sections 8.1, 8.2, 8.3 and 8.4).

(2) Remove the two M3L6 binding head screws holding the front guide assembly from each side.



(2) Remove the four M3L6 binding head screws holding the front guide assembly.



(3) Detach the front guide assembly from the scanner unit.

Reattaching the front guide assembly

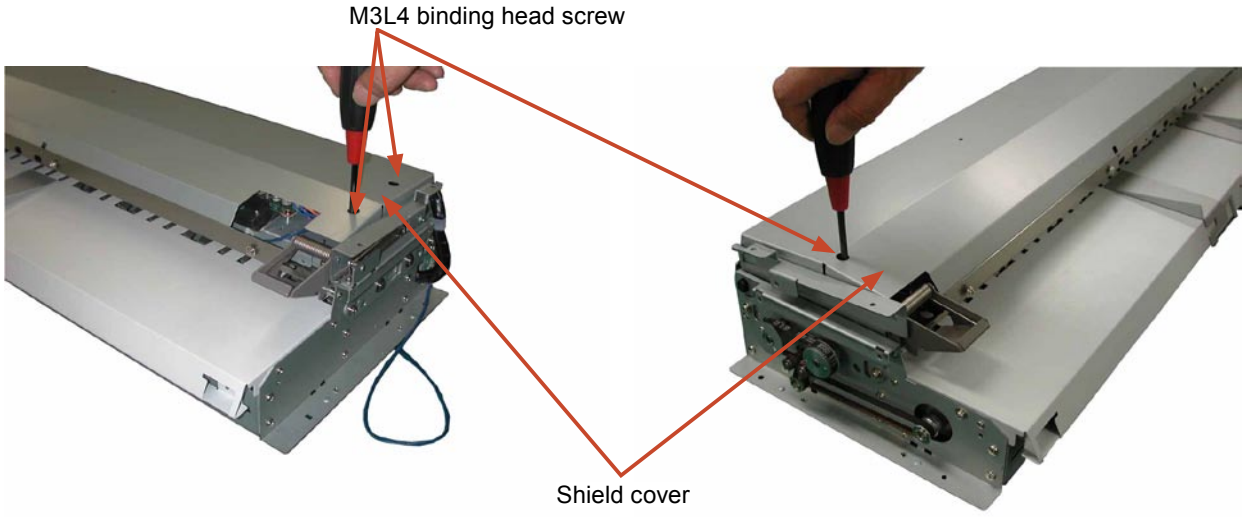
(1) Reattach the front guide assembly in the reverse order in which it was detached.

8.6 Shield Cover

Detaching the shield cover

(1) Detach the top cover (see Section 8.1).

(2) Remove the three M3L4 binding head screws from the access holes of the shield cover as shown in the photographs below.



(3) Detach the shield cover.

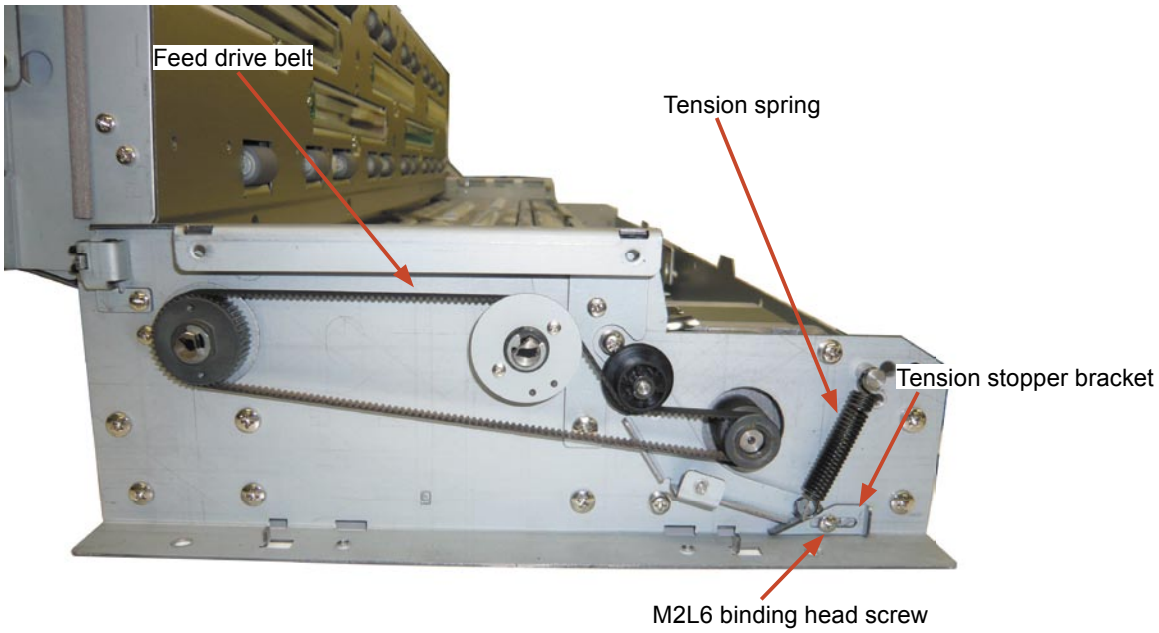
Reattaching the rear cover

(1) Reattach the shield cover in the reverse order in which it was detached.

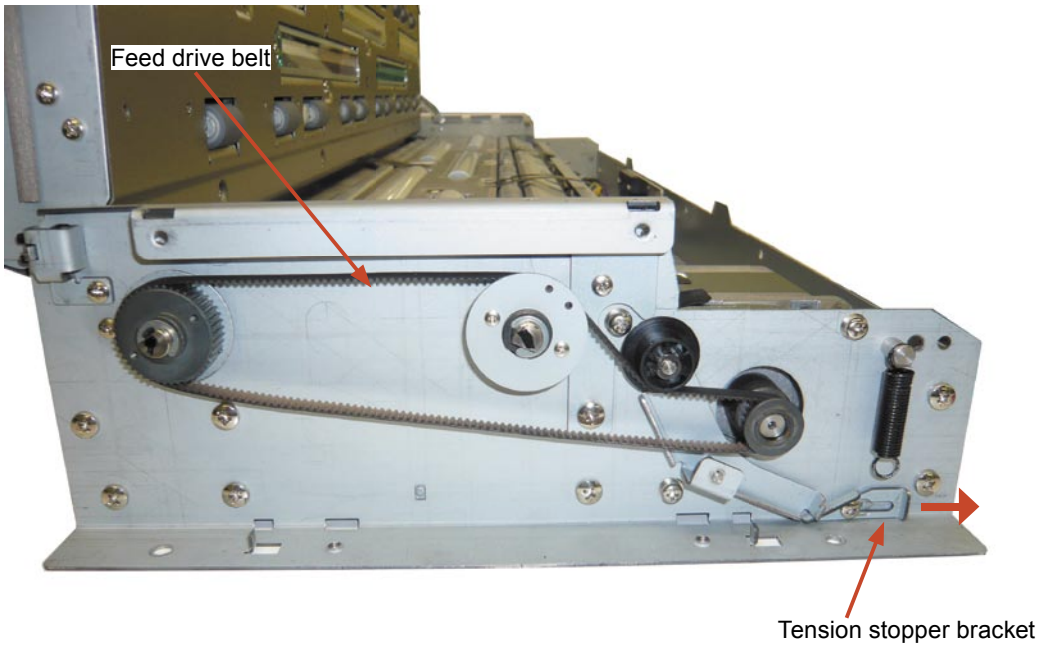
8.7 Feed Drive Belt

Detaching the feed drive belt

(1) Detach the top cover (see Sections 8.1).
(2) Detach the front covers (see Section 8.2).
(3) Detach the left side cover (see Sections 8.3).



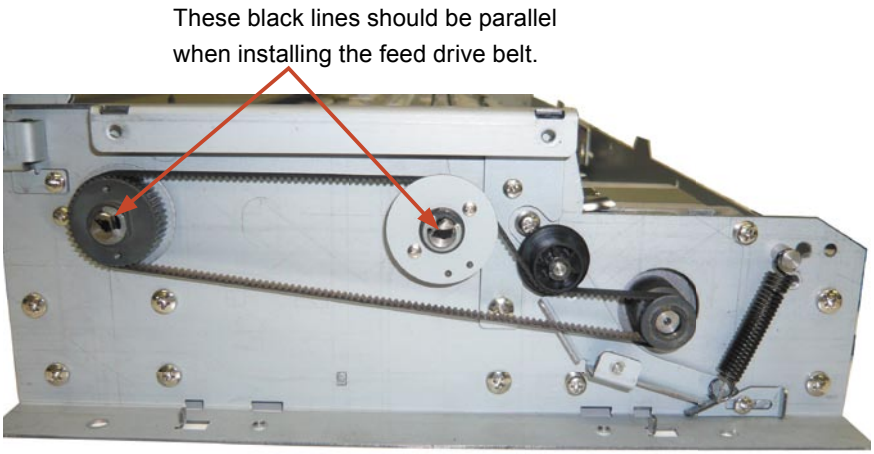
(4) Detach the tension spring from the feed belt tension pin.



(5) Loosen the M2L5 binding screw holding the tension stopper bracket, and then slide it to right side.
(6) Detach the feed drive belt from the feed pulley.

Reattaching the feed drive belt

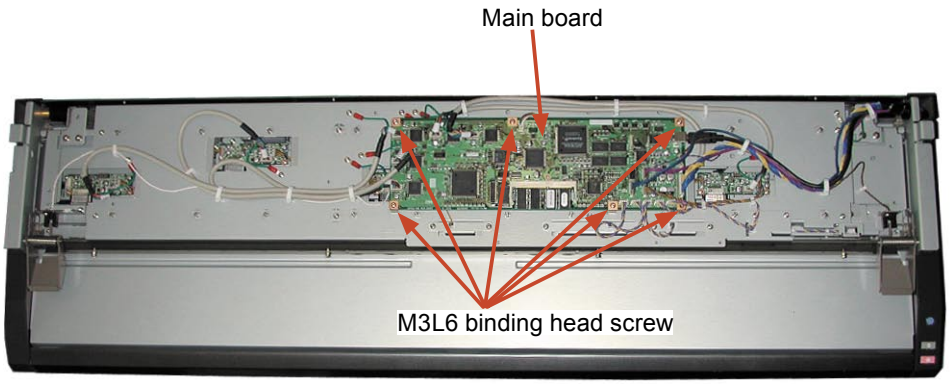
(1) Reattach the feed drive belt by reversing the sequence of steps in which it was detached.



8.8 Main Board

Detaching the main board

(1) Detach the top and shield covers (see Sections 8.1 and 8.6).
(2) Disconnect the all cables from the main board.
(3) Remove the six M3L6 binding head screws holding the main board.
(4) Detach the main board from the board base bracket.



Reattaching the main board

(1) Reattach the main board by reversing the sequence of steps in which it was detached.
(2) Perform the calibration and the software adjustment if the main board was replaced.

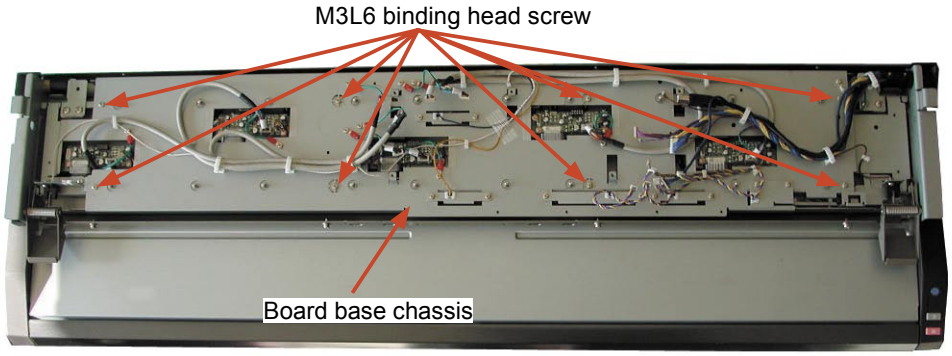
8.9 Board Base Chassis

Detaching the board base chassis

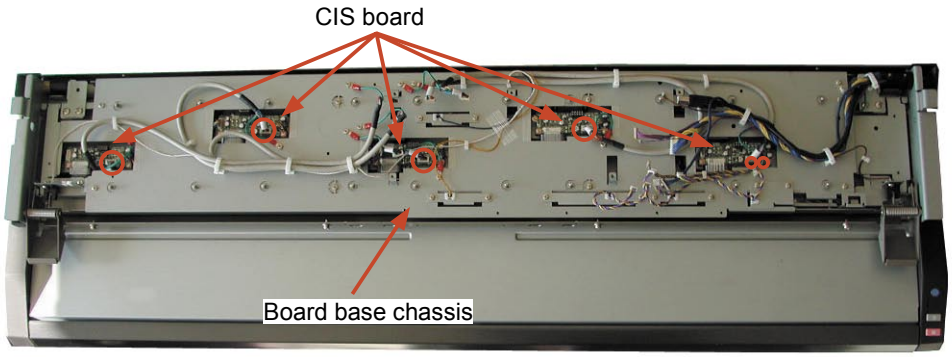
(1) Detach the top and shield covers (see Sections 8.1 and 8.6).

(2) Detach the main board. (see Sections 8.8).

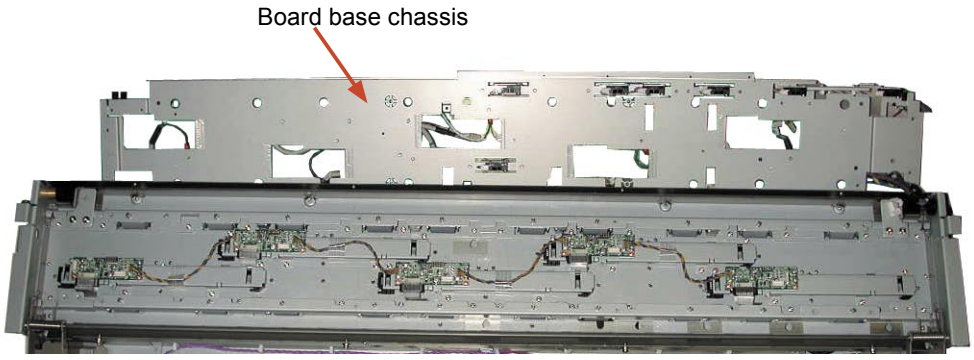
(3) Remove the eight M3L6 binding head screws holding the board base chassis.



(4) Disconnect the cables from the CIS boards.



(5) Lay the board base chassis down at the rear of the main unit as shown below.



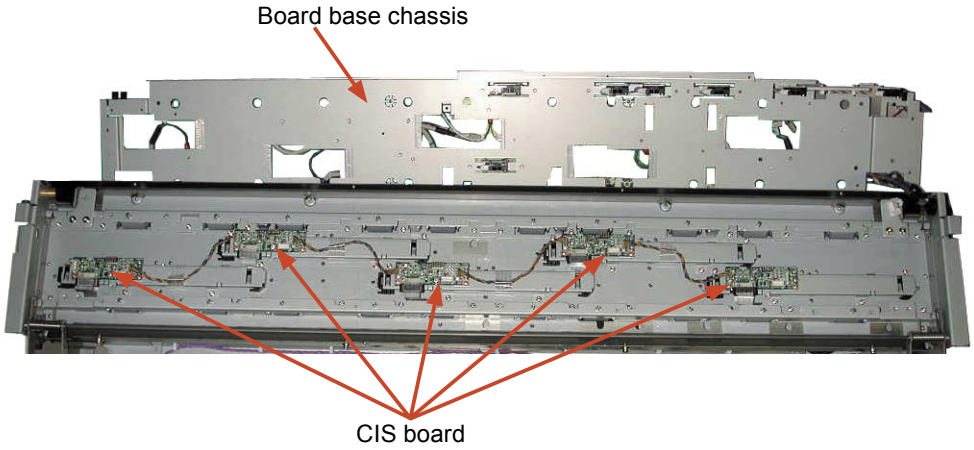
Reattaching the board base chassis

(1) Reattach the board base chassis by reversing the sequence of steps in which it was detached.

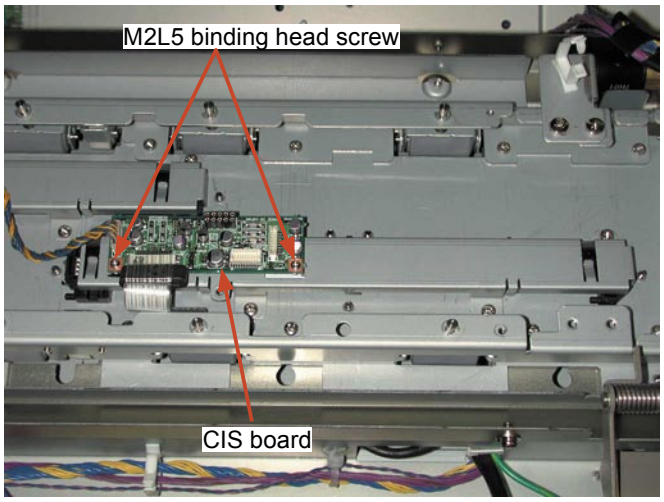
8.10 CIS Board

Detaching the CIS board

(1) Detach the top and shield covers (see Sections 8.1 and 8.6).
(2) Detach the main board. (see Sections 8.8).
(3) Detach the board base chassis. (see Sections 8.9).



(4) Remove the two M2L5 binding head screws holding the CIS board.



(5) Disconnect the cables from the CIS board.
(6) Detach the CIS board from the main unit.

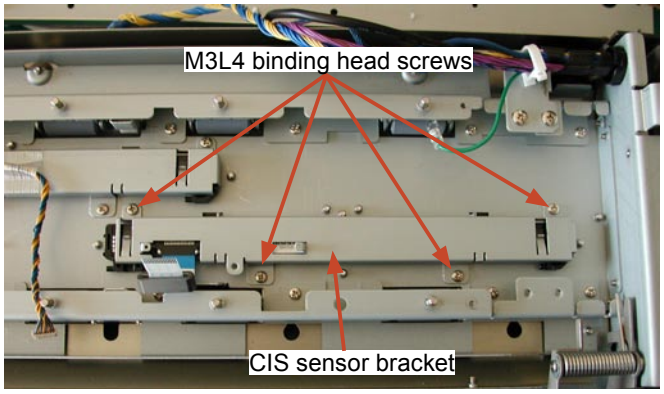
Reattaching the board base chassis

(1) Reattach the CIS board by reversing the sequence of steps in which it was detached.
(2) Perform the calibration if the CIS board was replaced.

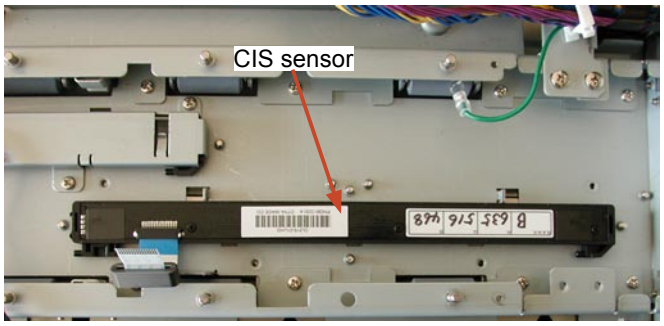
8.11 CIS Sensor

Detaching the CIS sensor

(1) Detach the top and shield covers (see Sections 8.1 and 8.6).
(2) Detach the main board. (see Sections 8.8).
(3) Detach the board base chassis. (see Sections 8.9).
(4) Detach the CIS board. (see Sections 8.10).
(5) Remove the four M3L4 binding head screws holding the CIS sensor bracket, and then detach the CIS sensor bracket.



(6) Detach the CIS sensor from the main unit.



Reattaching a CIS sensor

(1) Reattach the CIS sensor by reversing the sequence of steps in which it was detached.
(2) Use a CIS sensor of the same rank when replacing a CIS sensor.
The CIS sensor rank is indicated on the CIS sensor unit and the bottom of the scanner chassis.

(3) Perform the calibration and the software adjustment if the main board was replaced.

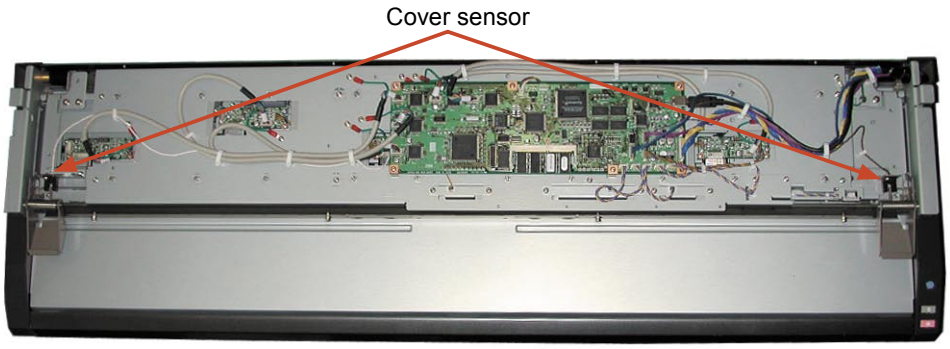
How to find out the CIS sensor rank

There is the CIS sensor rank label on the bottom chassis as shown in a picture below. So prepare same rank of the CIS sensor before replacing the CIS sensor.

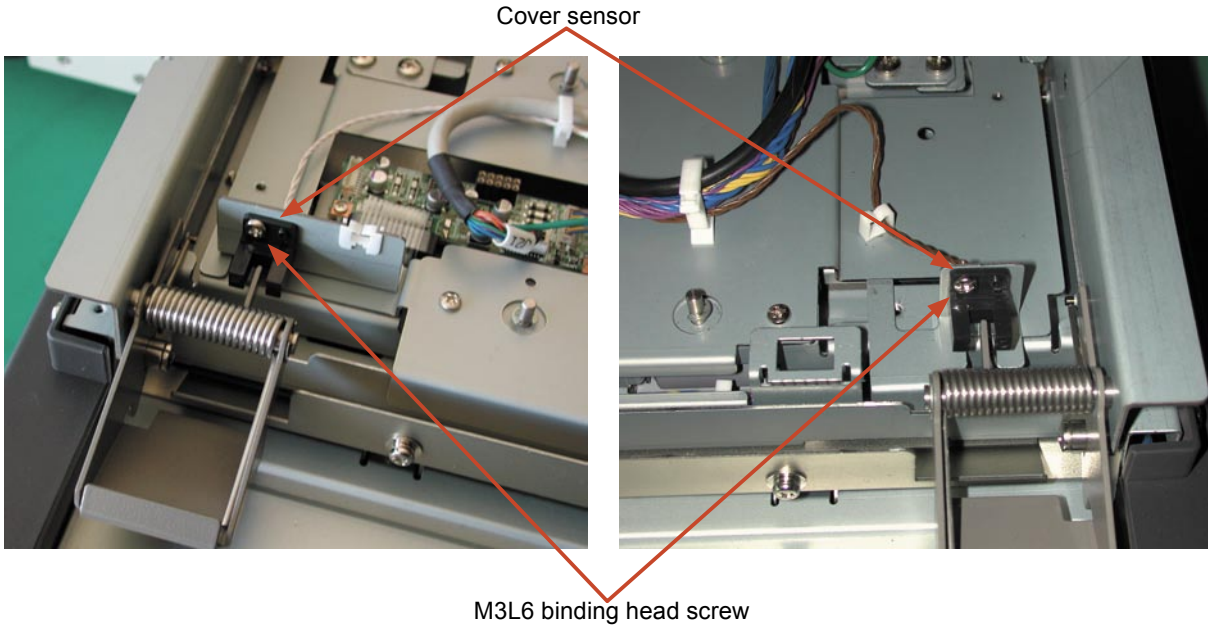
8.12 Cover Sensor

Detaching the cover sensor

(1) Detach the top and shield covers (see Sections 8.1 and 8.6).



(2) Remove the M3L6 binding head screw holding the cover sensor.



(3) Disconnect the cable that is connected to the cover sensor.

(4) Detach the cover sensor from the board base assembly.

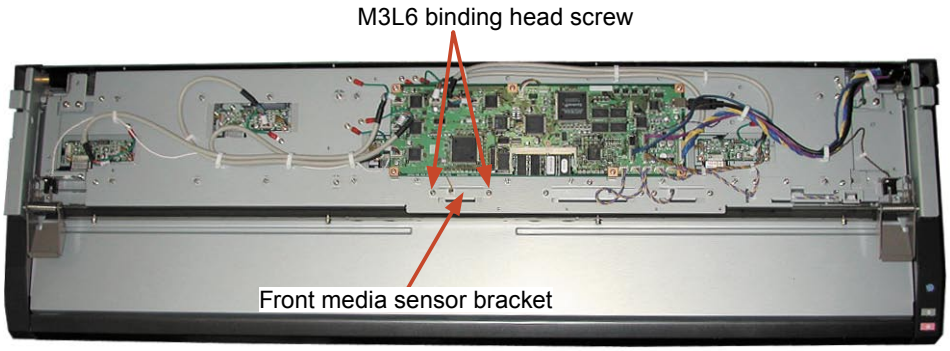
Reattaching the cover sensor

(1) Reattach the cover sensor by reversing the sequence of steps in which it was detached.

8.13 Front Media Sensor

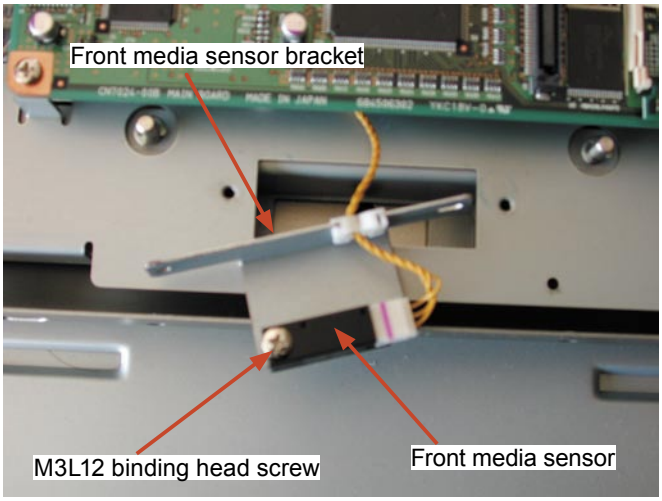
Detaching the front media sensor

(1) Detach the top and shield covers (see Sections 8.1 and 8.6).



(2) Remove the tow M3L6 binding head screws holding the front media sensor bracket.

(3) Disconnect the cable that is connected to the front media sensor.



(4) Remove the M3L12 binding head screws holding the front media sensor.

(5) Detach the front media sensor from the front media sensor bracket.

Reattaching the front media sensor

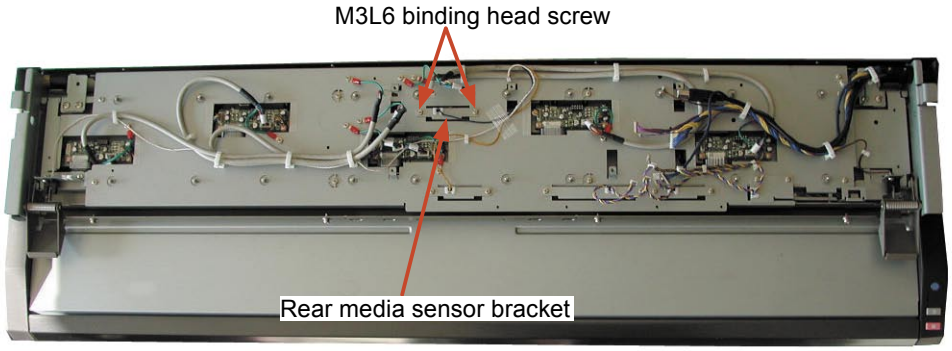
(1) Reattach the front media sensor by reversing the sequence of steps in which it was detached.

(2) Perform the software adjustment (scanning start position adjustment) if the front media sensor was replaced.

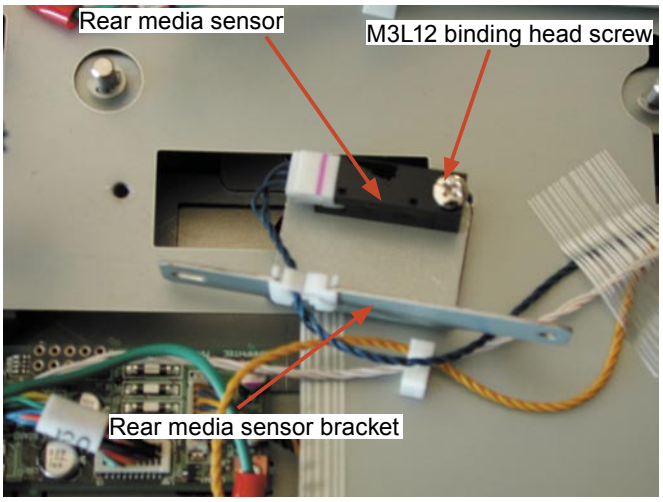
8.14 Rear Media Sensor

Detaching the rear media sensor

(1) Detach the top and shield covers (see Sections 8.1 and 8.6).
(2) Detach the main board. (see Sections 8.8).



(3) Remove the tow M3L6 binding head screws holding the rear media sensor bracket.
(4) Disconnect the cable that is connected to the rear media sensor.



(5) Remove the M3L12 binding head screws holding the rear media sensor.
(6) Detach the rear media sensor from the rear media sensor bracket.

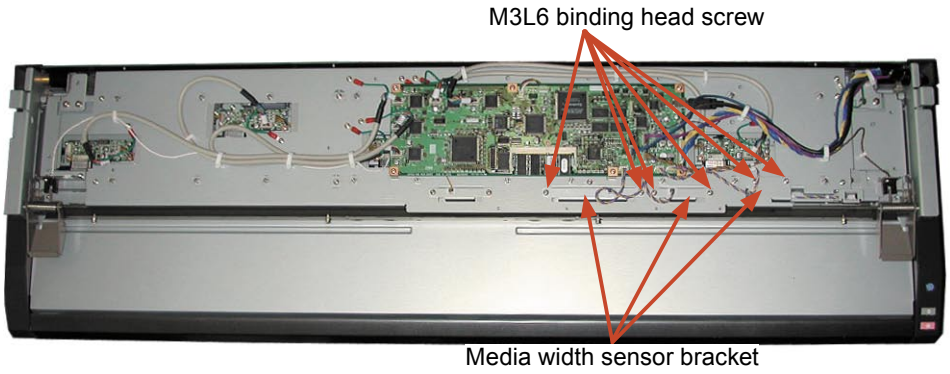
Reattaching the rear media sensor

(1) Reattach the rear media sensor by reversing the sequence of steps in which it was detached.
(2) Perform the software adjustment (scanning start position adjustment) if the rear media sensor was replaced.

8.15 Media width sensors

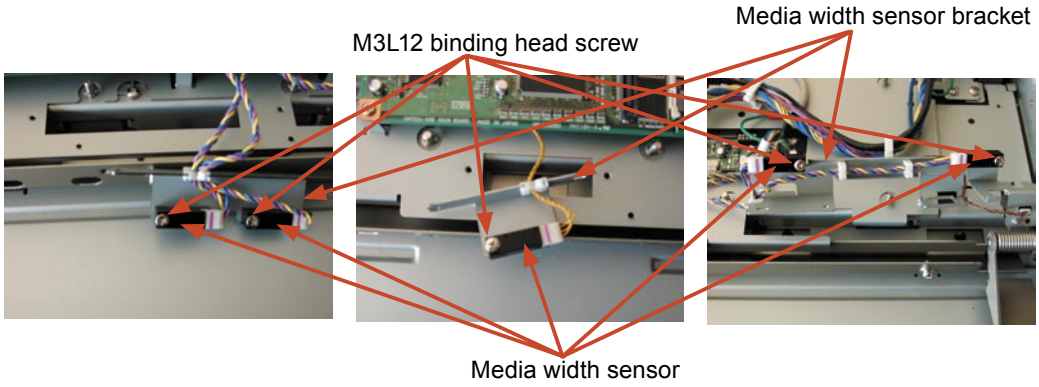
Detaching the media width sensors

(1) Detach the top and shield covers (see Sections 8.1 and 8.6).



(2) Remove the tow M3L6 binding head screws holding the media width sensor brackets.

(3) Disconnect the cable that is connected to the media width sensors.



(4) Remove the M3L12 binding head screws holding the media width sensors.

(5) Detach the media width sensors from the media width sensor brackets.

Reattaching the media width sensors

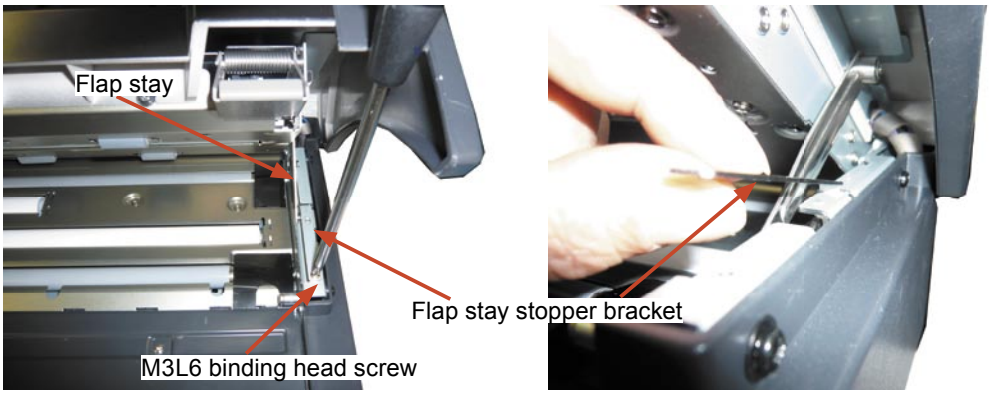
(1) Reattach the media width sensors by reversing the sequence of steps in which they were detached.

8.16 Document Roller Assembly

Detaching the document roller assembly

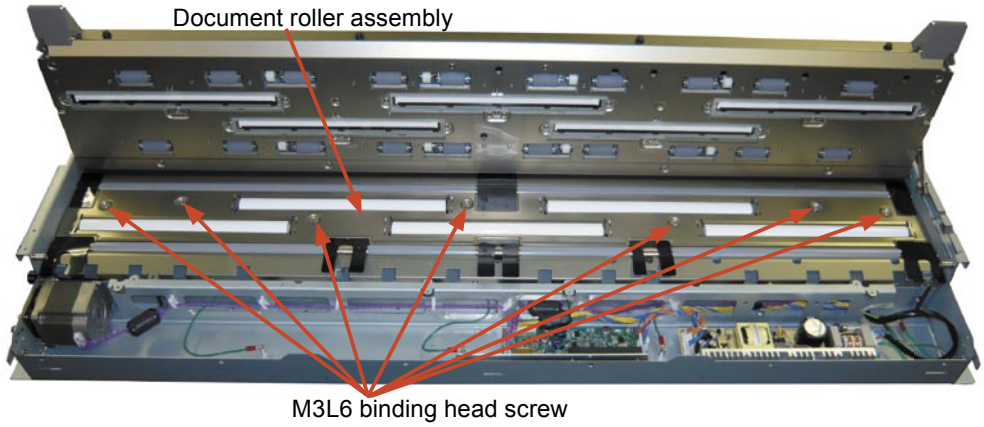
(1) Detach the top, front, left side and right side covers (see Sections 8.1, 8.2, 8.3 and 8.4).

(2) Remove the M3L6 binding head screw holding the flap stay stopper bracket.



(3) Detach the flap stay stopper bracket.

(4) Remove the seven M3L6 binding head screws holding the document roller assembly.



(5) Detach the document roller assembly from the main unit.

Reattaching the document roller assembly

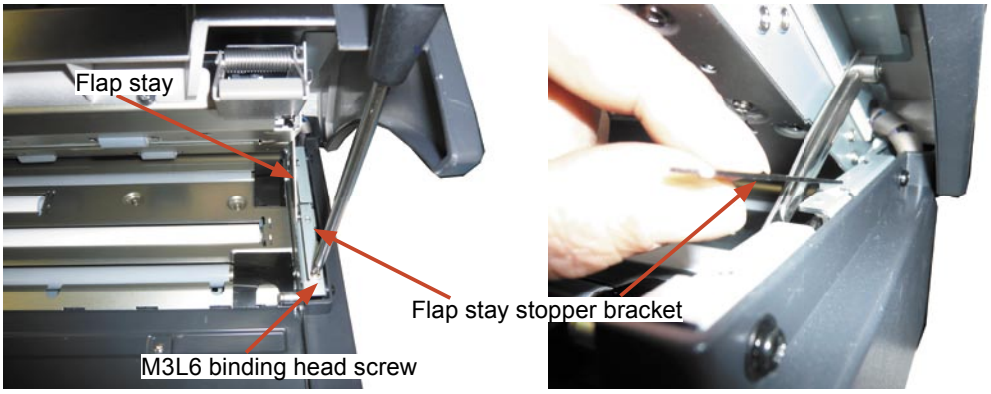
(1) Reattach the document roller assembly by reversing the sequence of steps in which it was detached.

(2) Perform the calibration and the software adjustment if the document roller assembly was replaced or detached.

8.16 Contact Glass Assembly

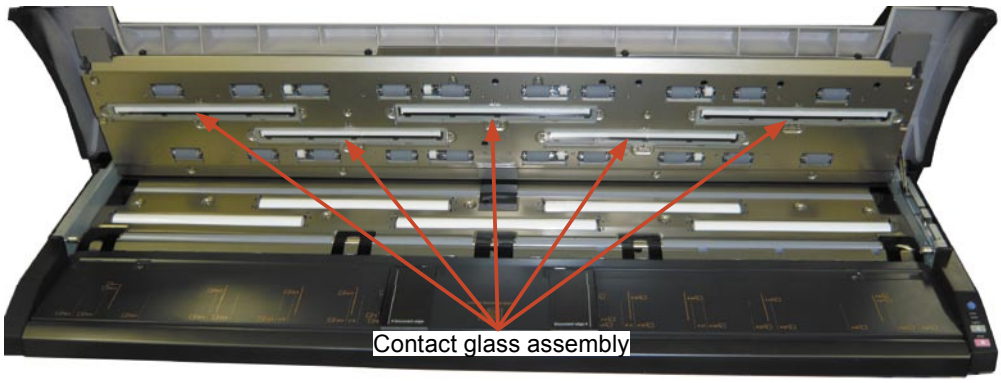
Detaching the contact glass assembly

(1) Remove the M3L6 binding head screw holding the flap stay stopper bracket.

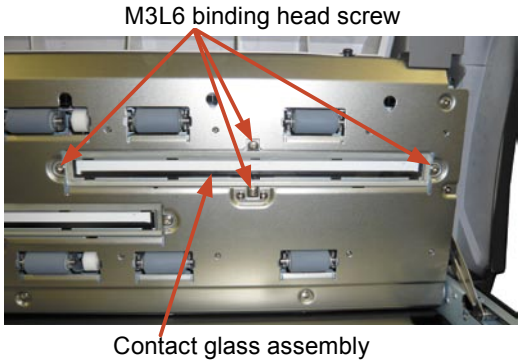


(2) Detach the flap stay stopper bracket.

(3) Open the top cover.



(4) Remove the four M3L6 binding head screws holding the contact glass assembly.



(5) Detach the contact glass assembly from the top cover unit.

Reattaching the contact glass assembly

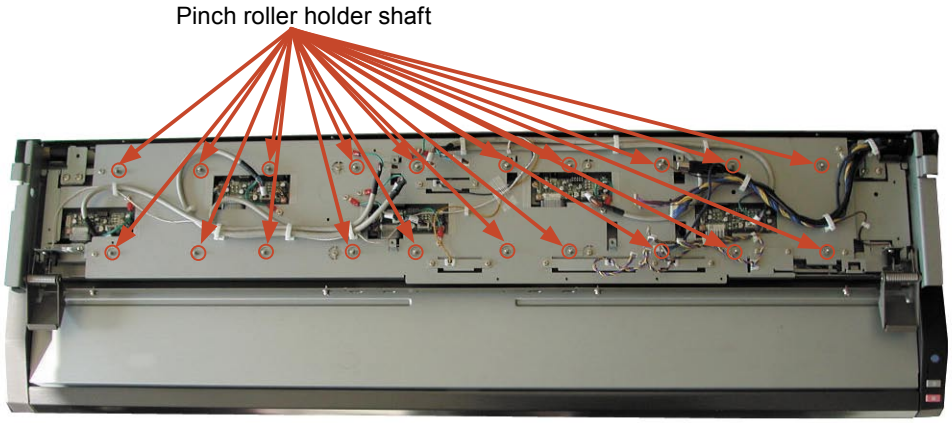
(1) Reattach the contact glass assembly by reversing the sequence of steps in which it was detached.
(2) Keep clean the surface of the contact glass assembly and do not make the finger-print on glass when installing the contact glass.
(3) Blow out any dust from the surface of the CIS sensor when installing the contact glass.
(4) Perform the calibration and the software adjustment if the contact glass assembly was replaced or detached.

8.17 Pinch Roller

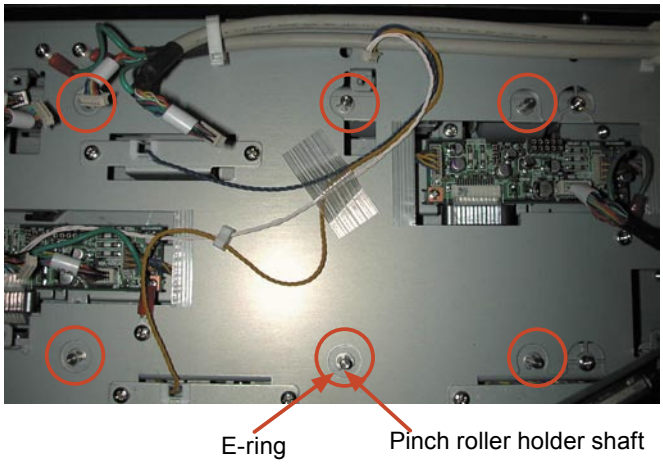
Detaching the pinch roller

(1) Detach the top and shield covers (see Sections 8.1 and 8.6).

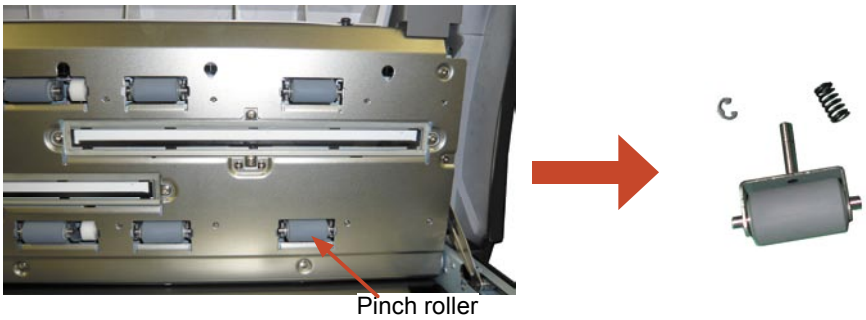
(2) Detach the main board when the pinch roller under the main board is replaced. (see Sections 8.8).



(3) Remove the E-ring holding the pinch roller holder shaft.



(4) Detach the pinch roller and the spring from the bottom of the top cover unit.



Reattaching the pinch roller

(1) Reattach the pinch roller by reversing the sequence of steps in which it was detached.

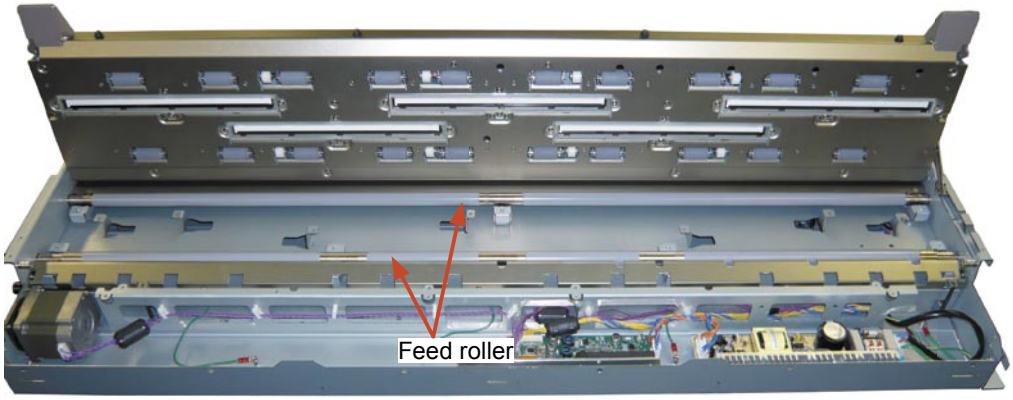
(2) Perform the calibration and the software adjustment if the pinch roller was replaced or detached.

8.18 Feed Rollers

Detaching the feed rollers

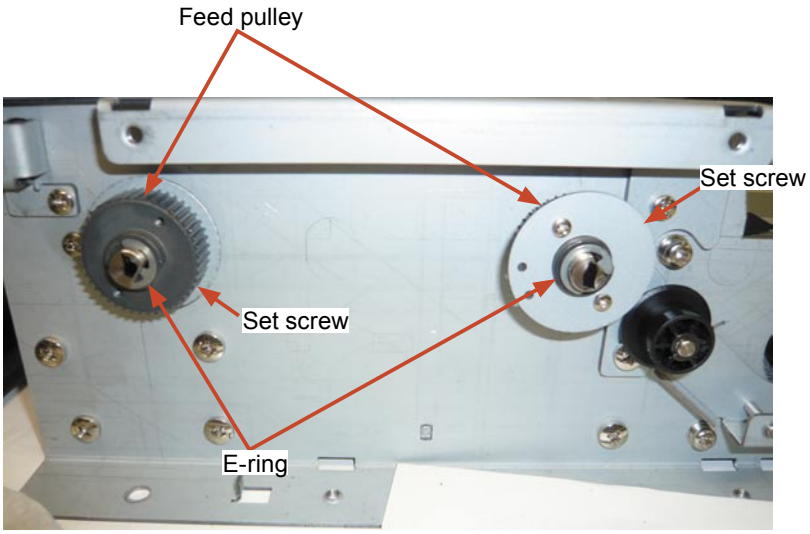
(1) Detach the top, front, left side and right side covers (see Sections 8.1, 8.2, 8.3 and 8.4).

(2) Detach the document roller assembly (see Section 8.16).



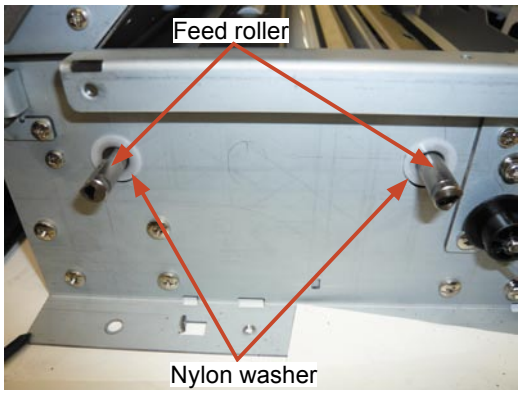
(3) Detach the feed drive belt (see Section 8.7).

(4) Remove the E-ring from the feed roller holding the feed pulleys.

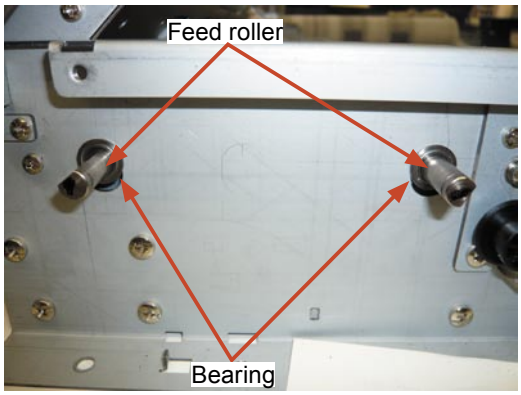


(5) Loosen the set screw holding the feed pulley.

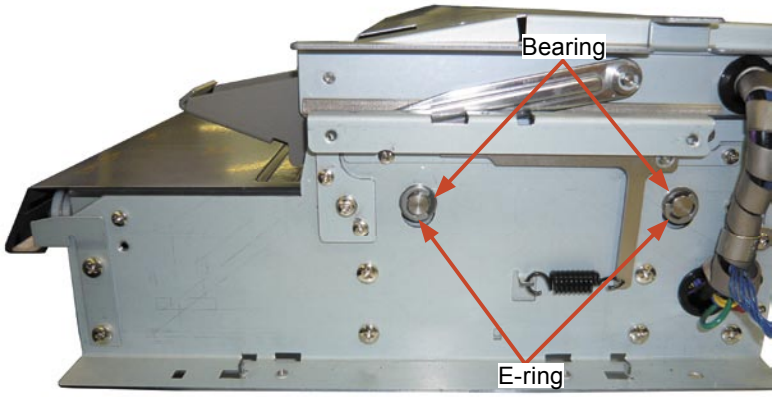
(6) Remove the feed pulley from the feed roller. Then remove the nylon washer from the feed roller.



(7) Remove the bearing from the feed roller.

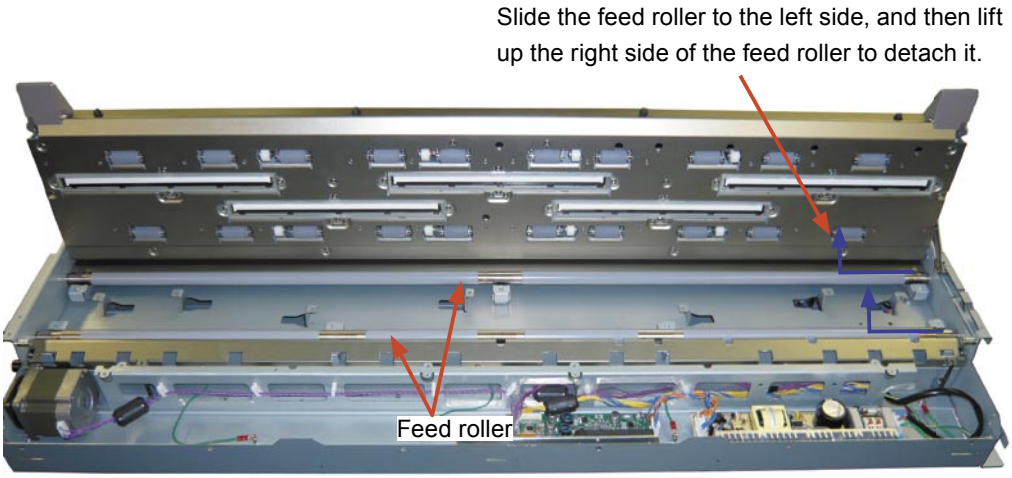


(8) Remove the E-rings holding the right side feed roller bearings.



(9) Detach the bearing from the feed roller.

(10) Slide the feed roller to the left side, and then lift up the right side of the feed roller to detach it.



Reattaching the feed rollers

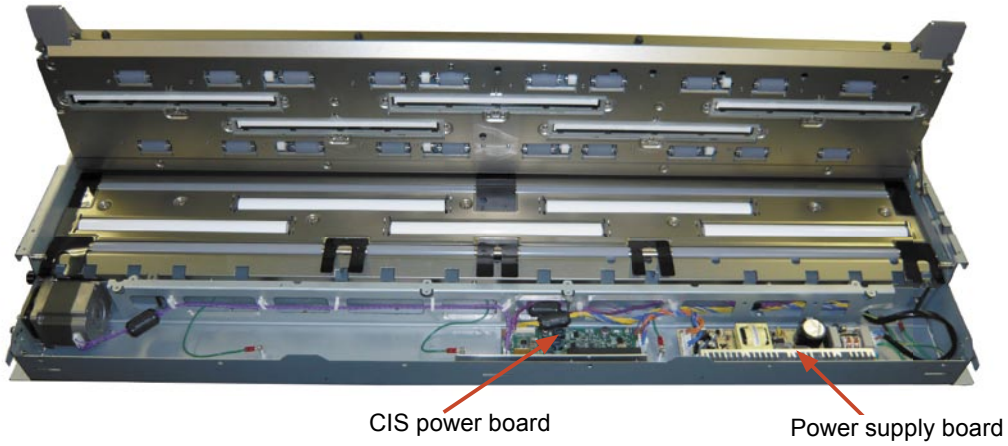
(1) Reattach the feed rollers by reversing the sequence of steps in which they were detached.

(2) Perform the calibration and the software adjustment if the feed roller was replaced or detached.

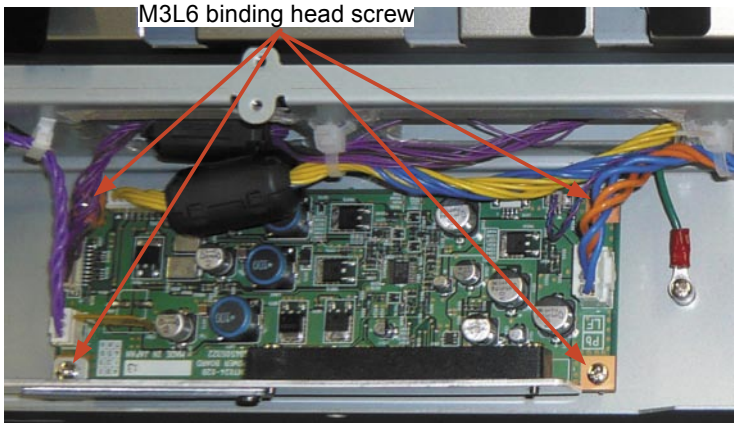
8.19 CIS Power Board

Detaching the CIS power board

(1) Detach the top, front, left side and right side covers (see Sections 8.1, 8.2, 8.3 and 8.4).



(2) Disconnect all the connectors on the CIS power board and remove the four M3L6 binding head screws holding the CIS power board.



(3) Detach the CIS power board from the unit.

Reattaching the CIS power board

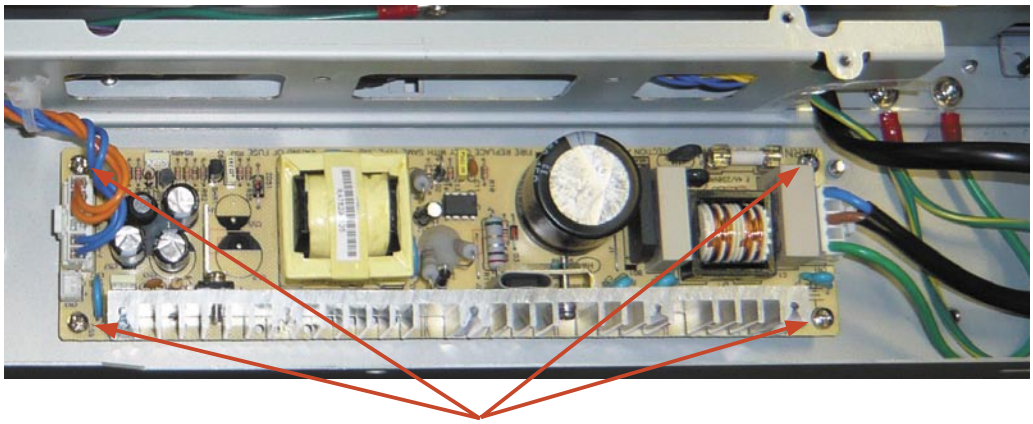
(1) Reattach the CIS power board in the reverse order in which it was detached.

8.20 Switching Power Supply Board

Detaching the switching power supply board

(1) Detach the top, front, left side and right side covers (see Sections 8.1, 8.2, 8.3 and 8.4).

(2) Remove the four M3L6 binding head screws holding the switching power supply board.



M3L6 binding head screw

(4) Disconnect all the connectors on the switching power supply board.

(5) Detach the switching power supply board from the unit.

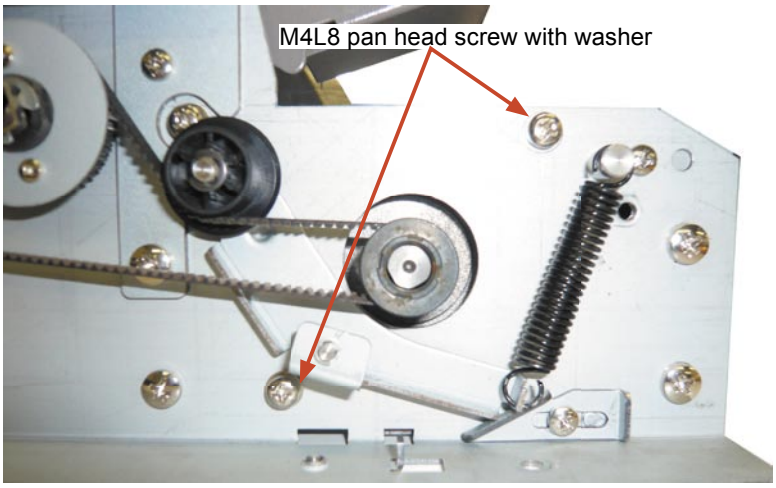
Reattaching the switching power supply board

(1) Reattach the switching power supply board in the reverse order in which it was detached.

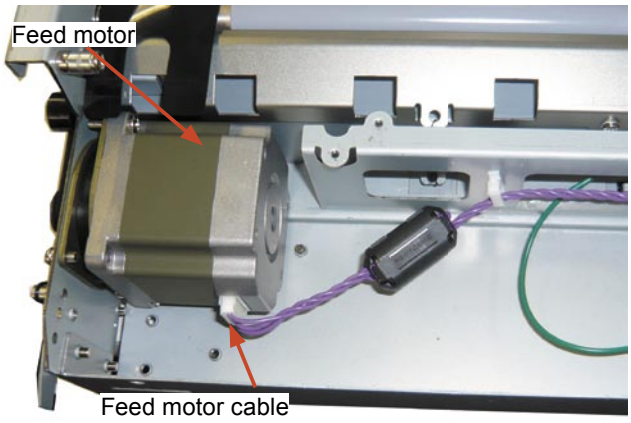
8.21 Feed Motor

Detaching the feed motor

(1) Detach the top, front, left side and right side covers (see Sections 8.1, 8.2, 8.3 and 8.4).
(2) Detach the feed drive belt (see Section 8.7).
(3) Remove the two M4L8 pan head screws with washer holding the feed motor.



(4) Disconnect the cable from the feed motor.



Reattaching the feed motor

(1) Reattach the feed motor in the reverse order in which it was detached.
(2) Perform the calibration and the software adjustment if the feed motor was replaced or detached.

9. ADJUSTMENTS USING THE SOFTWARE

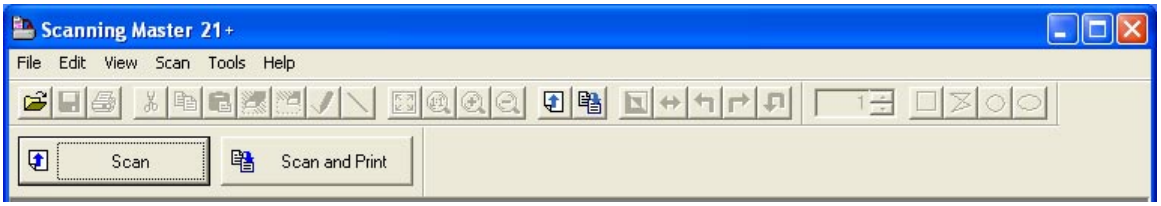
9.1 Starting the Software

- Ensure that OPS112 (Scanning Master 21+ Ver 6.60 or later) is installed.

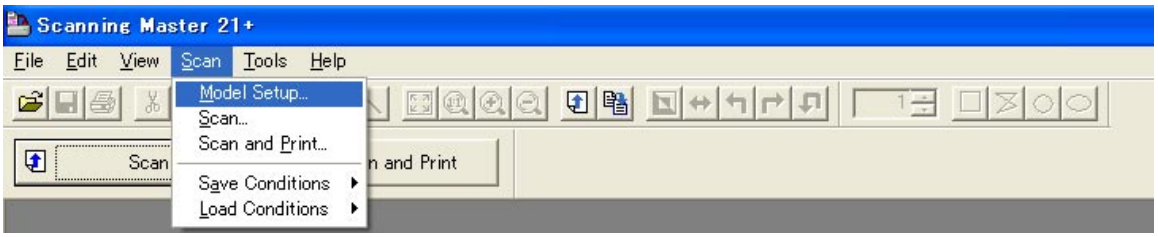
(1) Connect the scanner to the PC using a USB cable and turn it on.

(2) Start Windows (OS).

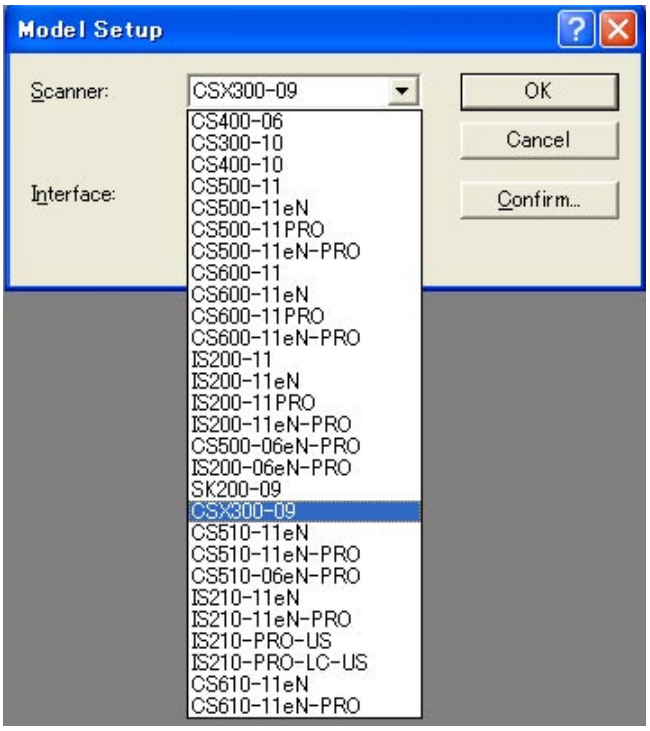
(3) Run the Scanning Master 21+ (OPS112) from the Start.



(4) Select "Model Setup" from the "Scan" menu.



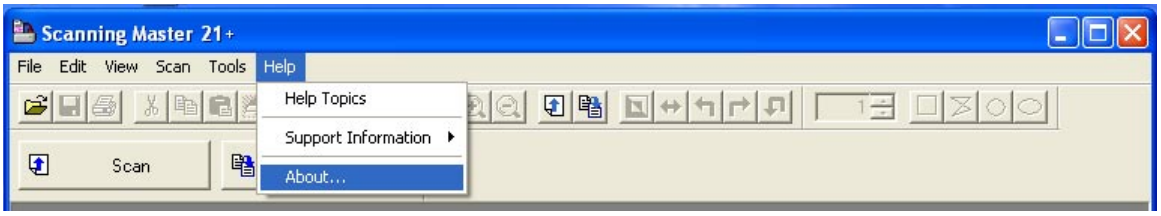
(5) Select "CSX300-09" from the pull down menu.



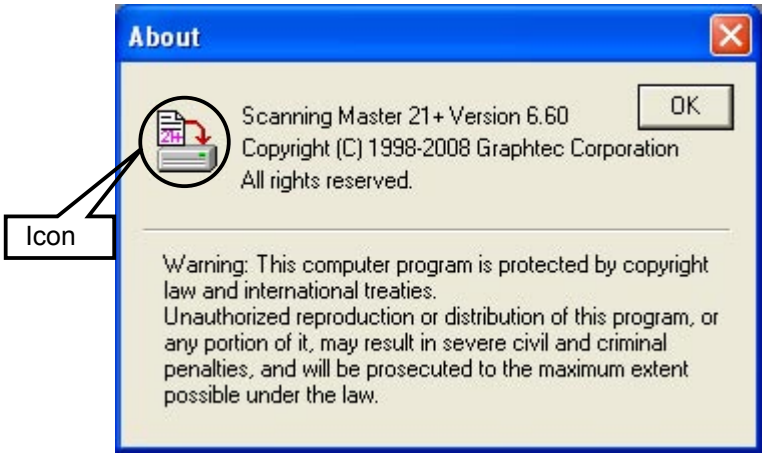
(6) Click the "Confirm" button to confirm the scanner is connected.

(7) The following message is displayed when the scanner is detected.
Click "OK" button.

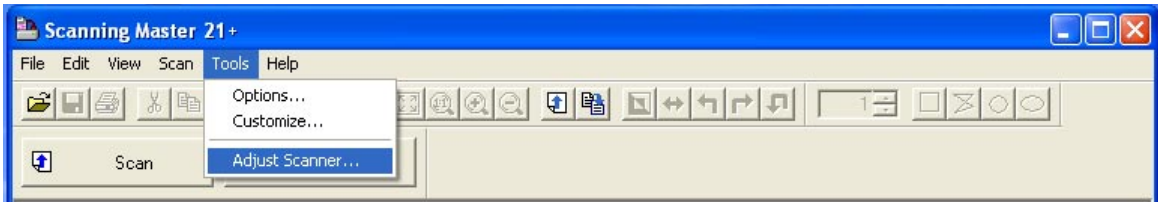
(8) Select "About" from the "Help" menu.



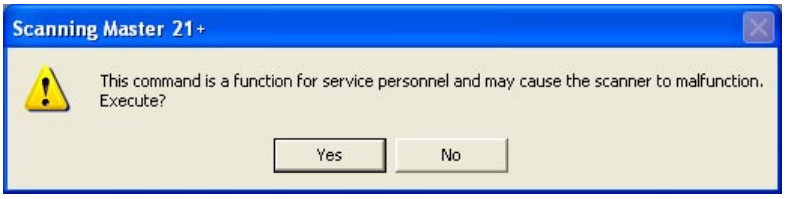
(9) Click the scanner icon while pressing and holding down the "Ctrl" key.
Next, click the "OK" button while pressing and holding down the "Shift" key.


About
Scanning Master 21+ Version 6.60
Copyright (C) 1998-2008 Graphtec Corporation
All rights reserved.
OK
Icon
Warning: This computer program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law.

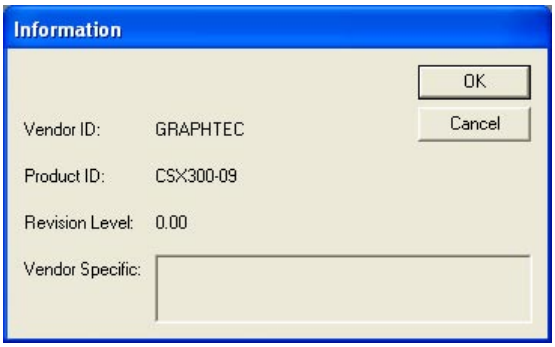
(10) Select "Adjust Scanner" from the "Tools" menu.

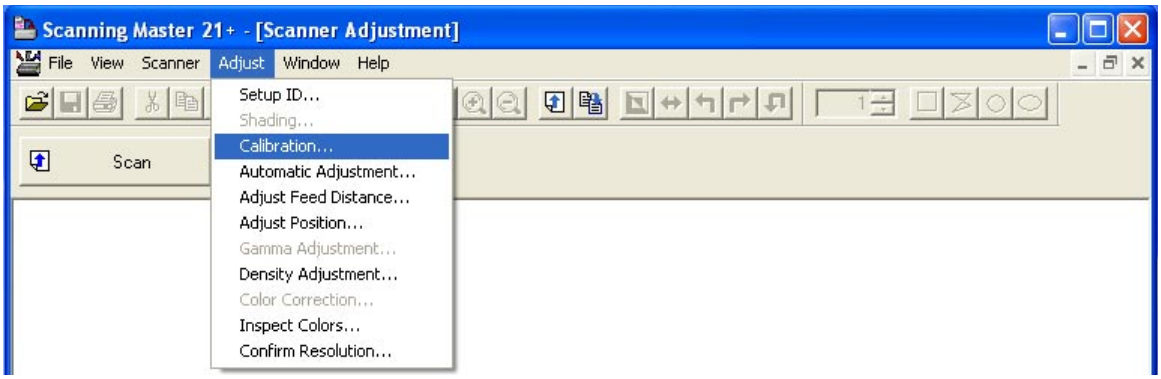


(11) Select "Yes".


Scanning Master 21+
This command is a function for service personnel and may cause the scanner to malfunction.
Execute?
Yes
No

(12) When you click the "OK" button in the following window, the Scanner Adjustment window will appear with an Adjust menu.





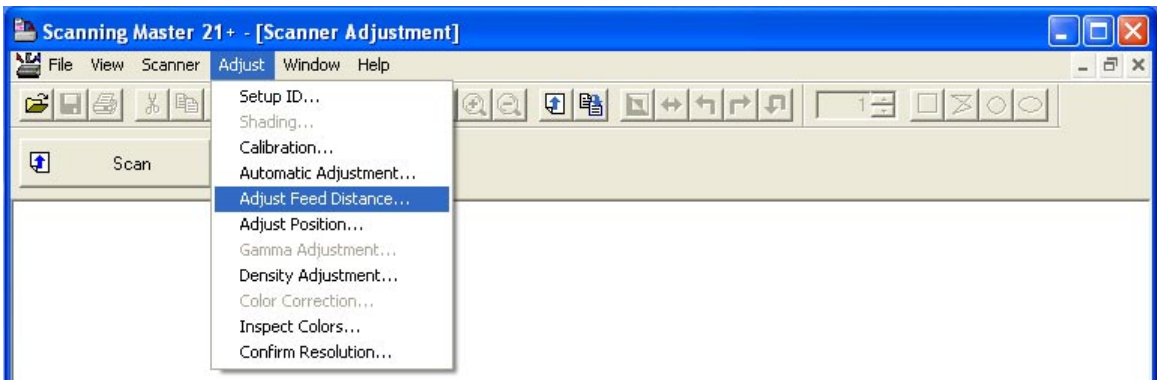
9.2 Preparations before Making Adjustments

Note the current feed distance adjustment and position adjustment values while making adjustments.
This enables the values to be entered directly from the keyboard to restore the scanner to its previous status if adjustment fails.
In main board replacement, the time required for adjustment can be reduced by setting the previously noted feed distance adjustment and position adjustment values. However, for image sensor unit replacement, all settings must be adjusted, eliminating the need to record the previous values.

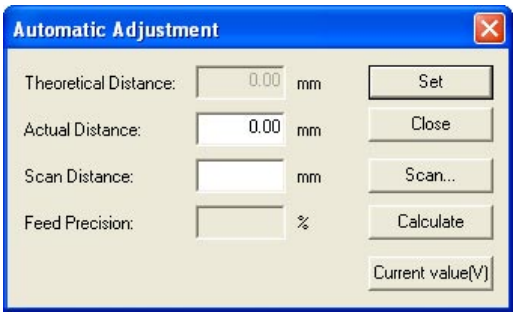
Procedure to get the previous adjustment value

(1) Start the Scanning Master 21+ (see Section 9.1).

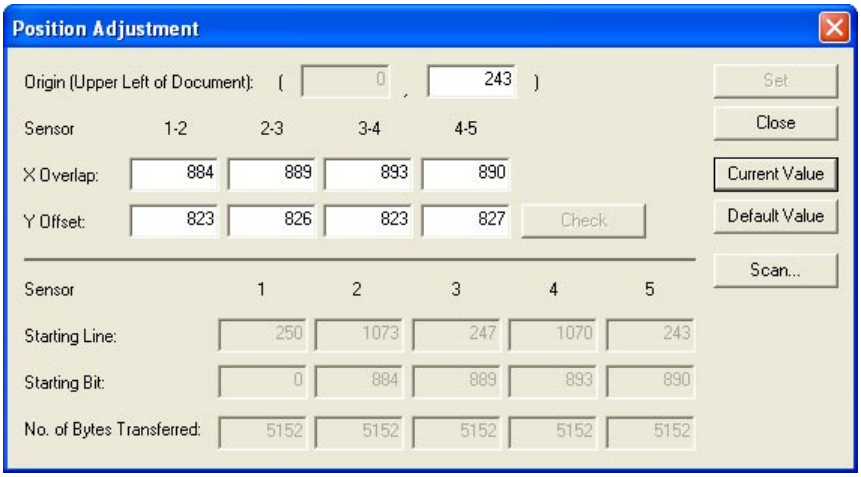
(2) Select "Adjust Feed Distance" from the "Adjust" menu.



(3) Click the "Current Value" button and note the value shown in the Feed Adjustment Value box. After finishing, click the "Close" button.



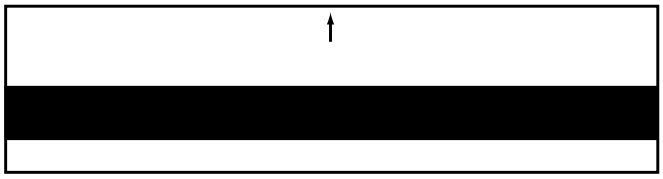
(4) Similarly, select "Adjust Position" from the "Adjust" menu and click the "Current Value" button. Note the values shown in the Origin, the X Overlap and Y Offset boxes and click the "Close" button.


Position Adjustment
Origin (Upper Left of Document): (0 , 243)
Sensor 1-2 2-3 3-4 4-5
X Overlap: 884 889 893 890
Y Offset: 823 826 823 827
Check
Sensor 1 2 3 4 5
Starting Line: 250 1073 247 1070 243
Starting Bit: 0 884 889 893 890
No. of Bytes Transferred: 5152 5152 5152 5152 5152
Set
Close
Current Value
Default Value
Scan...

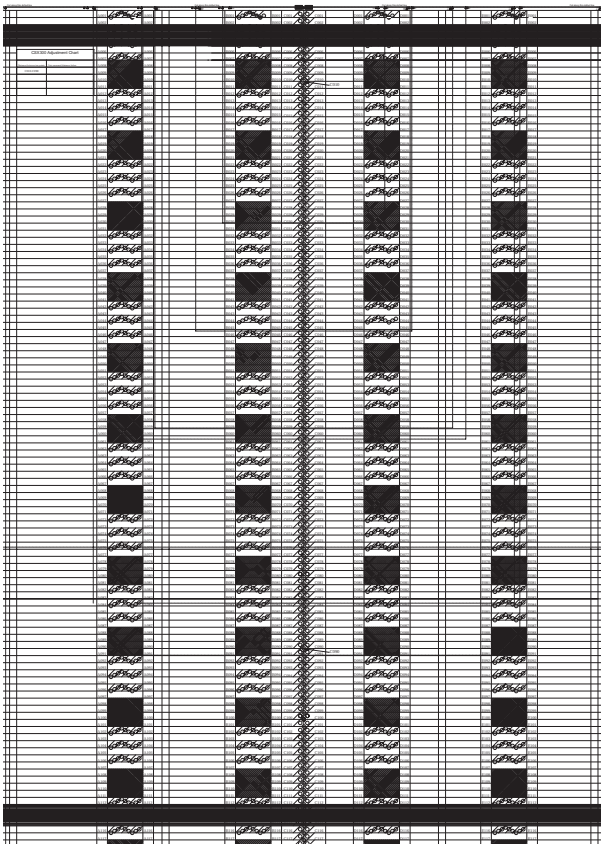
9.3 Preparing Adjustment Charts

There are the three kind of adjustment charts.

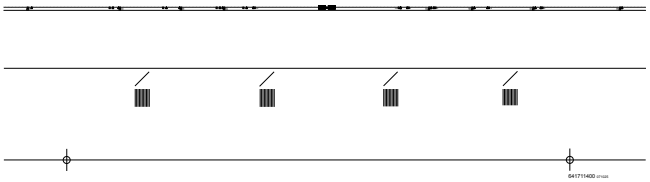
- Calibration Sheet: This sheet is used for the sensor sensitivity adjustment (White and black sheet, Standard accessory).



- CSX300 adjustment test chart: This chart is used for the manual sensor stitch adjustment, the feed distance adjustment and the scanning start position adjustment.

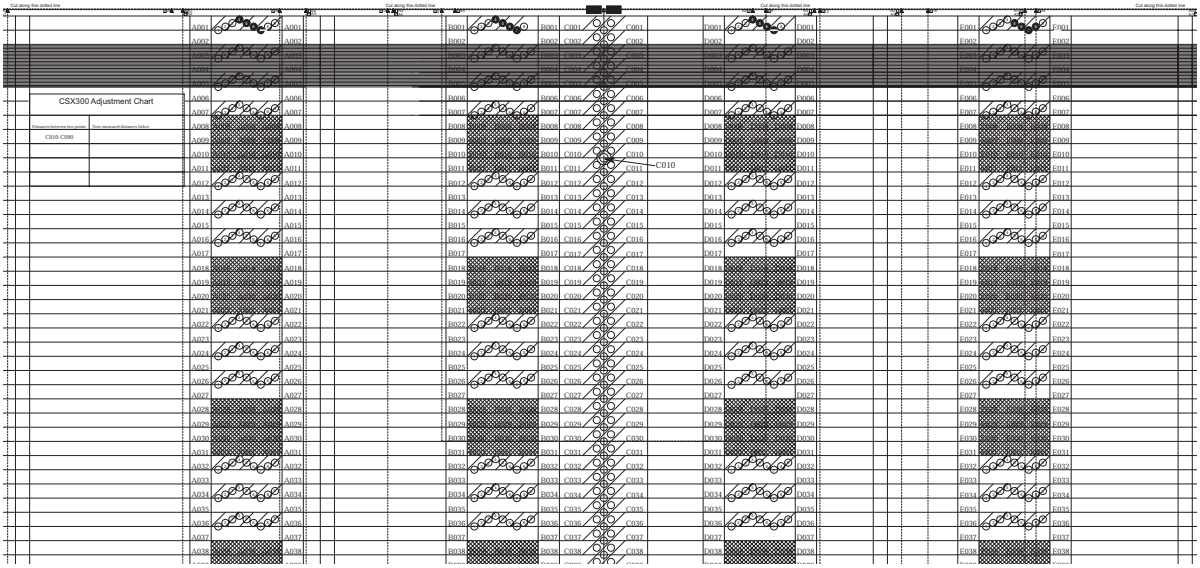


- Auto sensor stitch adjustment chart: This chart is used for the auto sensor stitch adjustment.



Preparing the CSX300 adjustment test chart

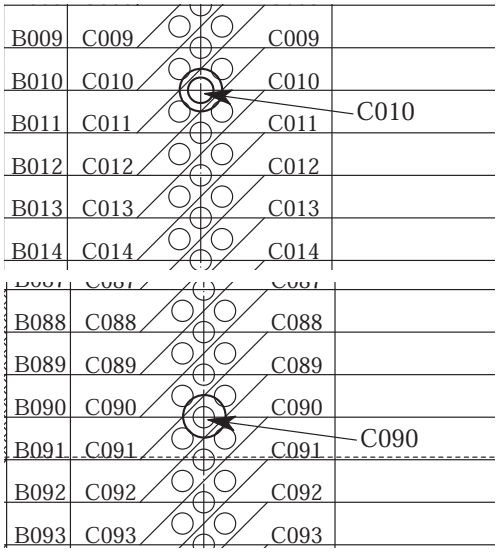
(1) Prepare a CSX300 adjustment test chart.
Print the Test Chart CSX300.pdf by the printer that is able to print A0 size.



(2) Make sure that the distances (measured with a glass scale) between the two points in all pairs are included in the chart in advance. (See the chart shown above.)

<<Tip 1>> The test chart is made of Mylar paper.
For use in normal office environments (normal temperatures and humidity levels), you should only need to measure each distance once.
Make sure that each distance is measured with the utmost accuracy.

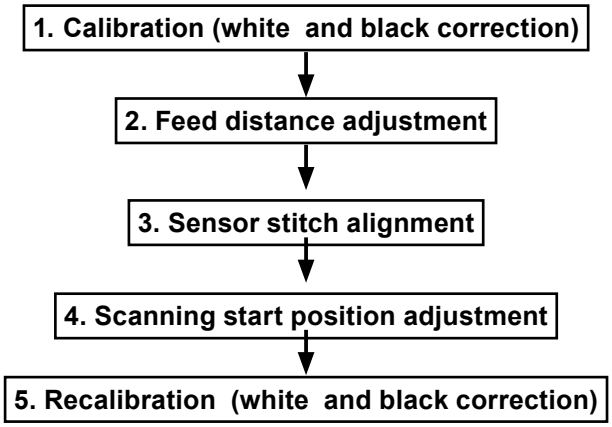
<<Tip 2>> Make sure that all staff members using this test chart select the same measurement points.
This chart has been designed with the assumption that the point shown below is used for measurement.



<<Tip 3>> If user-specified paper must be used for adjustments, you should make the measurements over as long a period of time as possible to obtain good results.

9.4 Making Adjustments

When you replaced the main board or the CIS sensors, follow the sequence of adjustments below.


1. Calibration (white and black correction)
2. Feed distance adjustment
3. Sensor stitch alignment
4. Scanning start position adjustment
5. Recalibration (white and black correction)

CHECKPOINT

Before beginning calibration, clean the contact glass plates and scanning-table surface. Any dust or dirt on those surfaces may affect the calibration results and resulting image quality.
Check that the calibration sheet is free of any dust or dirt.

9.4.1 Calibration (white and black correction)

In the following cases, perform this adjustment.

- When difference color appeared between each sensor.
- When you replaced the main board.
- When you replaced the CIS board.
- When you replaced or removed the CIS sensors.
- When you replaced or removed the contact glasses.

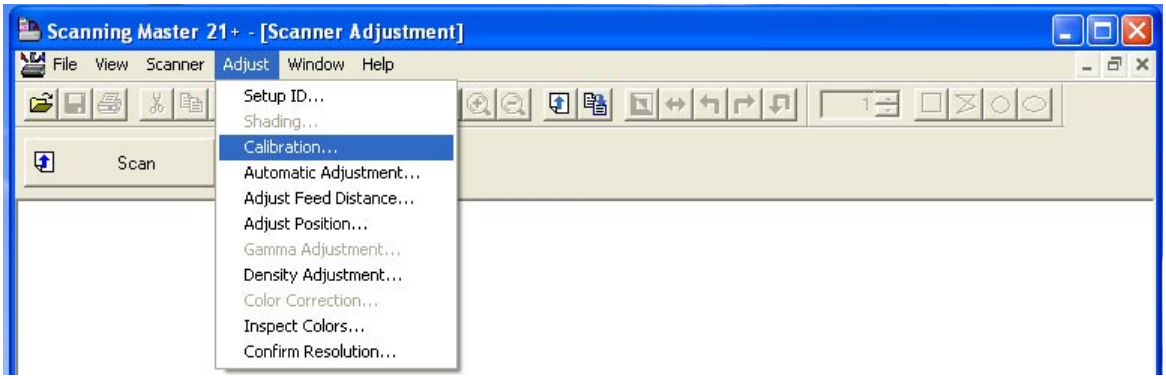
How to perform the calibration

(1) Connect the scanner to the computer. Turn on the power for the scanner then turn on power for the PC.

(2) Start Scanning Master 21+ (see Section 9.1).

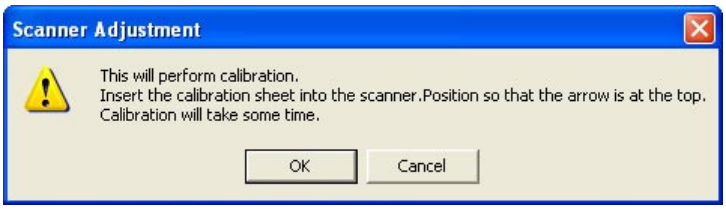
(3) Clean the contact glass plate surfaces and the pinch rollers.

(4) Select "Calibration" from the "Adjust" menu.



(5) Select All in Calibration and click the Execute button.

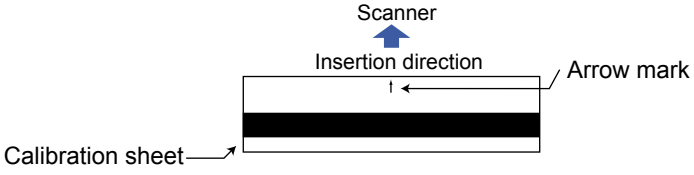
(6) The following message is displayed.


Scanner Adjustment
This will perform calibration.
Insert the calibration sheet into the scanner.Position so that the arrow is at the top.
Calibration will take some time.
OK
Cancel

Take out the white and black calibration sheet from its storage box.

Make sure that there is no dust on the calibration sheet.

Insert the calibration sheet into the scanner as instructed.



(7) Click the OK button to start scanning.
The scanned data is displayed when scanning is complete. Colors may differ slightly for individual sensors to make it easier to identify problem areas in calibration. This does not indicate a defect.
Check that there are no vertical streaks, such as white patches, in the scanned data.
(Streaks occur when calibration is not performed correctly due to contamination by dust or dirt.)

(8) If the data is normal, calibration is complete.
Click the Close button and exit calibration mode.

(9) If any abnormal data is observed, specify the problem areas as follows:
Select Specified Part in Calibration.

(10) The mouse arrow cursor changes to a cross cursor when moved over the data. Click the left mouse button with the mouse positioned over the streak data. The selected area is shown in blue. Repeat this procedure for any additional streaks.
Areas that have been selected (shown in blue) can be deselected by clicking the left mouse button again. To deselect all selected areas, click the Clear button.

(11) Once all required areas have been specified, remove the calibration sheet and clean the contact glass plate, pinch roller and bottom of upper cover surfaces. Check the calibration sheet for dust and dirt, then click the Execute button.

(12) Return to step (5) and verify the calibration results.

9.4.2 Feed distance adjustment

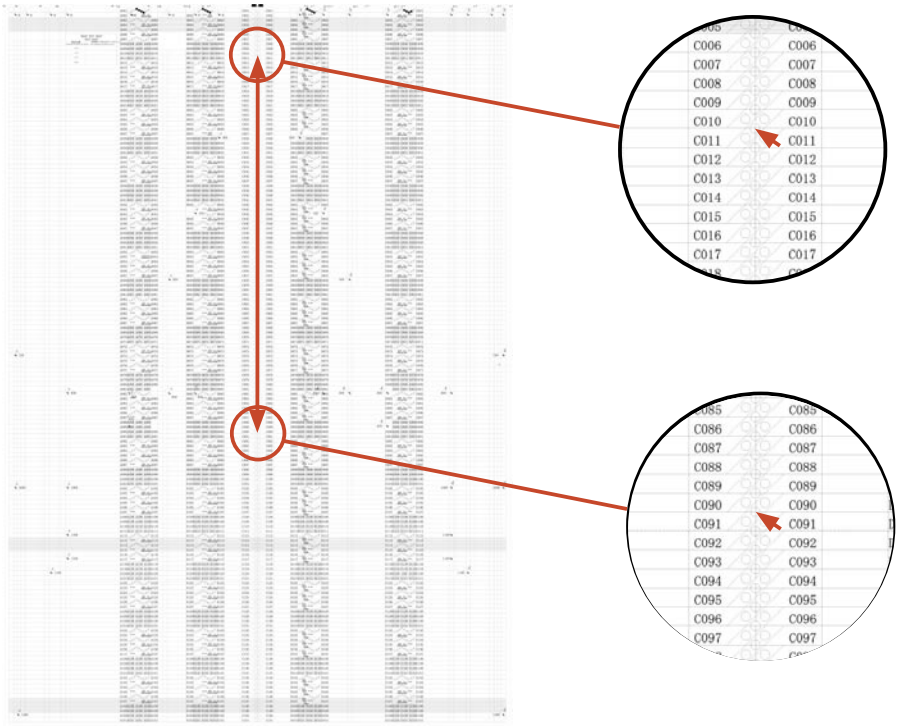
In the following cases, perform this adjustment.

- When the distance is different in the direction of the feed.
- When you replaced the main board.
- When you replaced or removed the CIS sensors.
- When you replaced or removed the feed motor.
- When you replaced or removed the feed rollers.

How to perform the feed distance adjustment

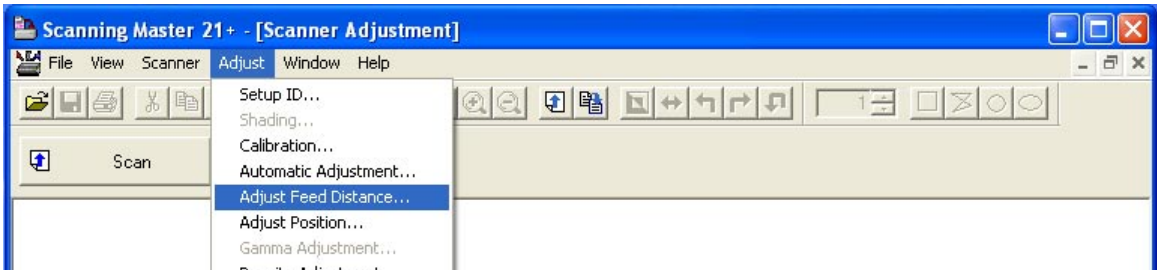
(1) Prepare the CSX300 Test Chart.

(2) Measure the distances between the C010 and the C090 points in the CSX300 Test Chart with a glass scale. And then record it.

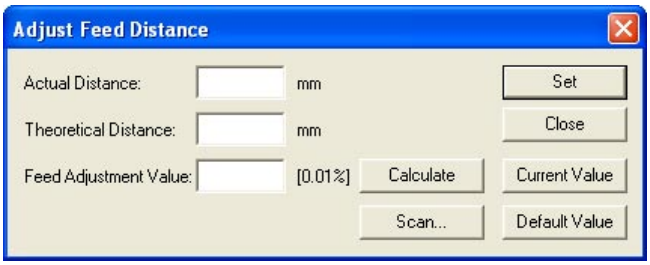


(3) Run the software. (See page 9-1) This is not necessary when the software is running already.

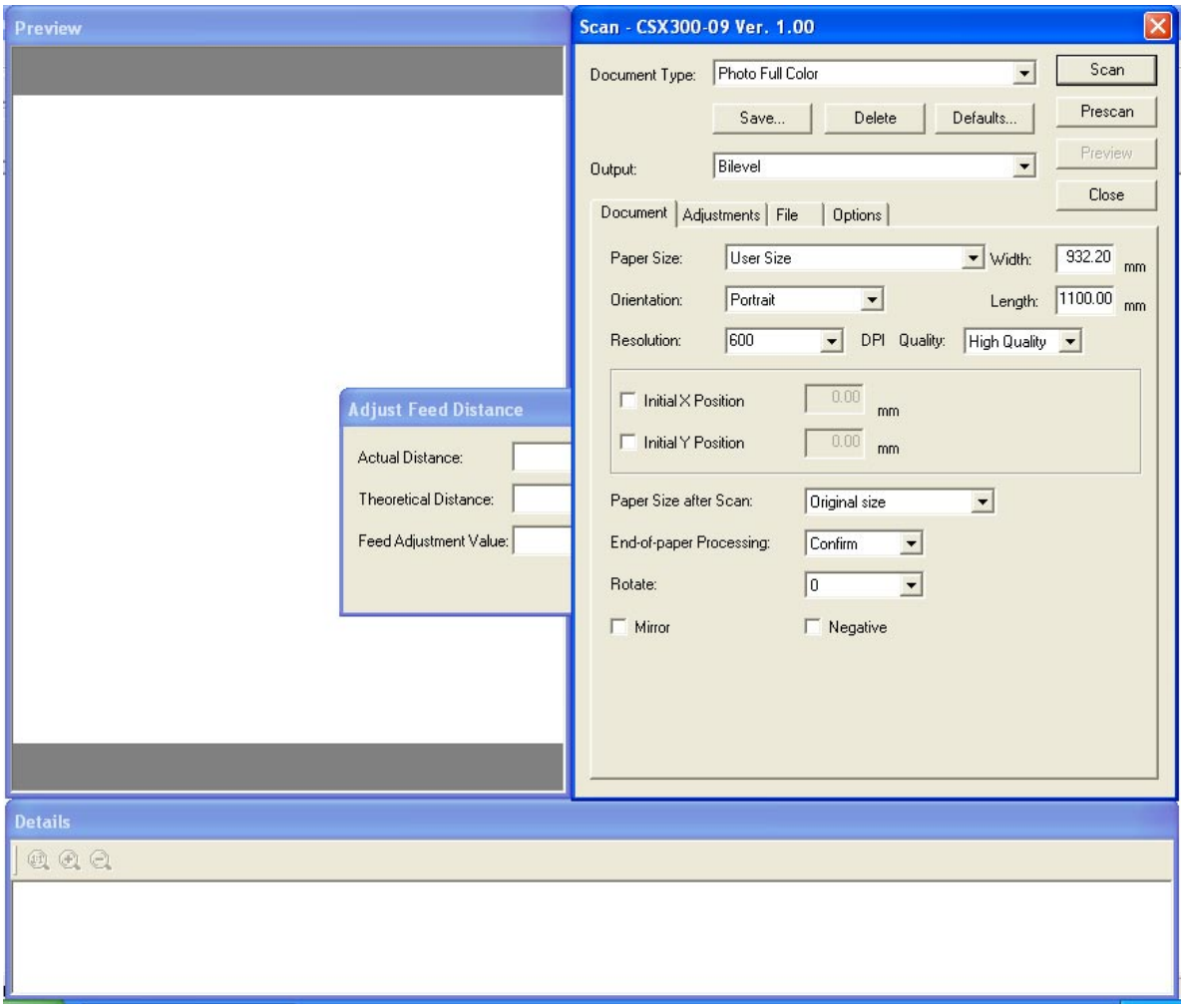
(4) Select "Adjust Feed Distance" from the "Adjust" menu.



(5) The following dialog box will appear. Correctly insert the CSX300 test chart to the scanner, and then click the "Scan" button.



(6) The following dialog box will appear. Click the "Scan" button.



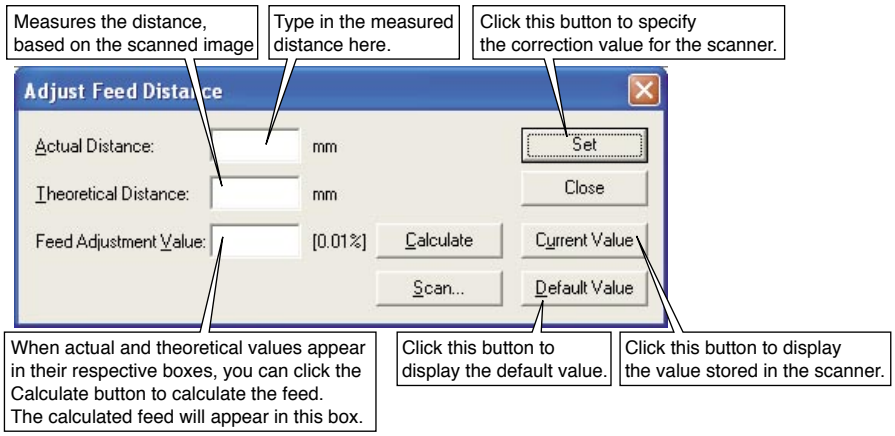
Select the following for "Document Info" and "Scan Settings":

"Document Info" Paper Size : User Size, Width: 932, Length 1100, Resolution: 600 dpi

Document Type : Photo Full Color

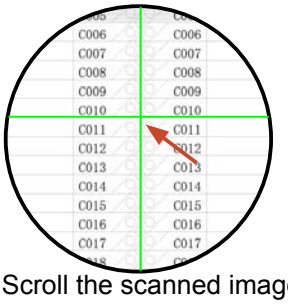
"Scan Settings" Output : Bilevel

The following dialog box appears, together with the scanned image.

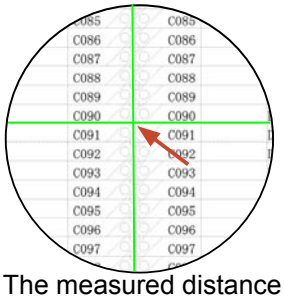

Measures the distance, based on the scanned image
Type in the measured distance here.
Click this button to specify the correction value for the scanner.
Adjust Feed Distance
Actual Distance:
mm
Set
Theoretical Distance:
mm
Close
Feed Adjustment Value:
[0.01%]
Calculate
Current Value
Scan...
Default Value
When actual and theoretical values appear in their respective boxes, you can click the Calculate button to calculate the feed. The calculated feed will appear in this box.
Click this button to display the default value.
Click this button to display the value stored in the scanner.

(8) Input the distance between C010 and C090 measured with a glass scale in the "Actual" box.

(9) Click anywhere within the "Theoretical" box and use the crosshairs cursor to click the white corner indicated by arrow "C010" on the scanned image.



(10) Scroll the scanned image to click the white corner indicated by arrow "C090" with the crosshairs cursor.



(11) The measured distance appears in the "Theoretical" box. Click the "Calculate" button.

(12) The correction value appears in the "Feed" box.
Click the "Set" button to allow the scanner to store the correction value.

(13) Place the test chart on the scanner again and click the "Scan" button.

(14) Repeat Steps 4 through 9 to perform the following calculations, based on the figures displayed in the dialog box.
[(Theoretical value - Actual value) / Actual value] x 100%
Confirm that this value is within ±0.1.

CHECKPOINT

The scanner may be defective if the calculated values do not fall within the above ranges.

9.4.3 Sensor Stitch Adjustment

In the following cases, perform this adjustment.

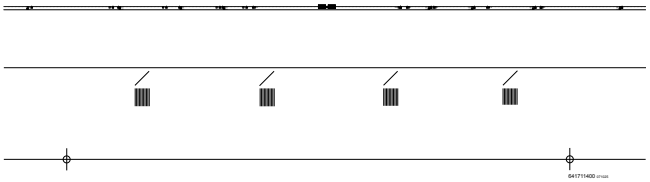
- When the sensor jointing is misaligned.
- When you replaced the main board.
- When you replaced or removed the CIS sensors.

Adjusting the sensor stitch

There are two ways to adjust the sensor stitch, which are the auto-sensor stitch adjustment and the manual sensor stitch adjustment.
Perform the auto-stitch adjustment normally.
Perform the manual sensor stitch adjustment if you do not have the auto-sensor stitch chart or the auto-sensor stitch adjustment is not performed correctly by using the bad condition of auto-sensor stitch adjustment chart.

Adjusting the sensor stitch by auto sensor stitch adjustment

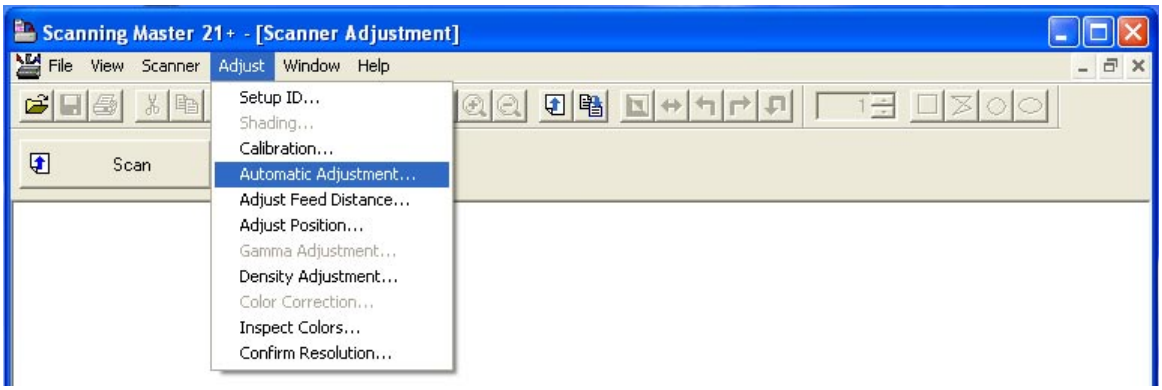
(1) Prepare the auto-sensor stitch adjustment chart.



(2) Run the software. (See page 9-1) This is not necessary when the software is running already.

(3) Insert the auto-sensor stitch adjustment chart into the scanner.
Position the center arrow mark of the auto sensor stitch adjustment chart to the center of the scanner and insert the auto sensor stitch adjustment chart.

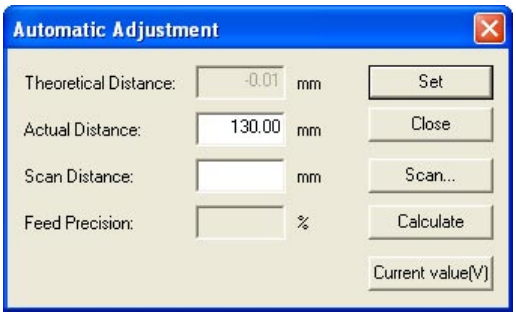
(4) Select "Auto Adjustment" from the "Adjust" menu.



(5) The following dialog box will appear. Click the "OK" button to start the sensor stitch adjustment.

The scanner start the stitch adjustment immediately.

(6) The following dialog box will appear when the sensor stitch adjustment has been completed.

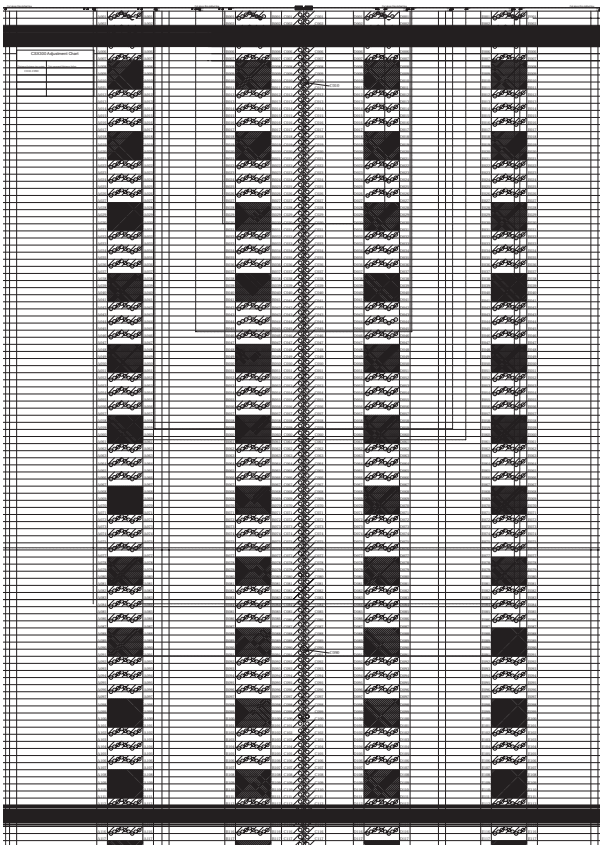


(7) Click the "Close" button to exit the sensor stitch adjustment.

(8) Perform the scanning start position adjustment, because the auto sensor stitch adjustment reset the scanning start position to be 0.

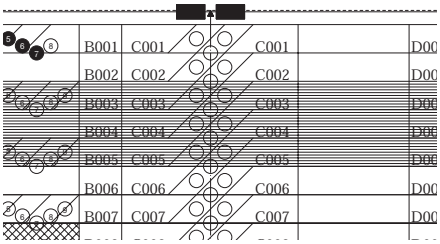
Adjusting the sensor stitch by manual sensor stitch adjustment

(1) Prepare the CSX300 adjustment test chart.

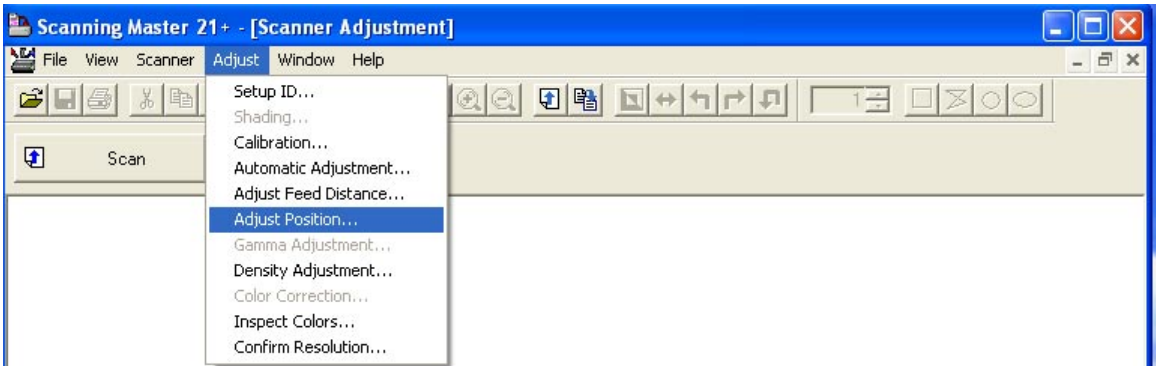


(2) Run the software. (See page 9-1) This is not necessary when the software is running already.

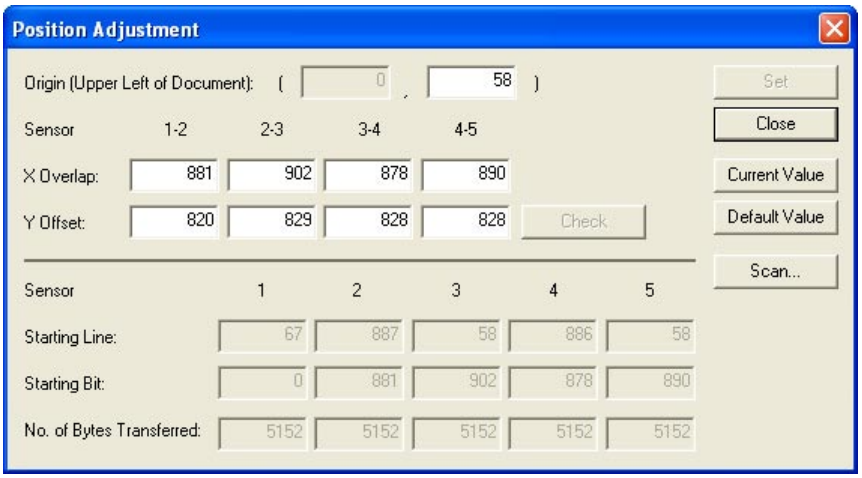
(3) Insert the CSX300 adjustment test chart into the scanner.
Position the center arrow mark of the CSX300 adjustment test chart to the center of the scanner and insert the CSX300 adjustment test chart.



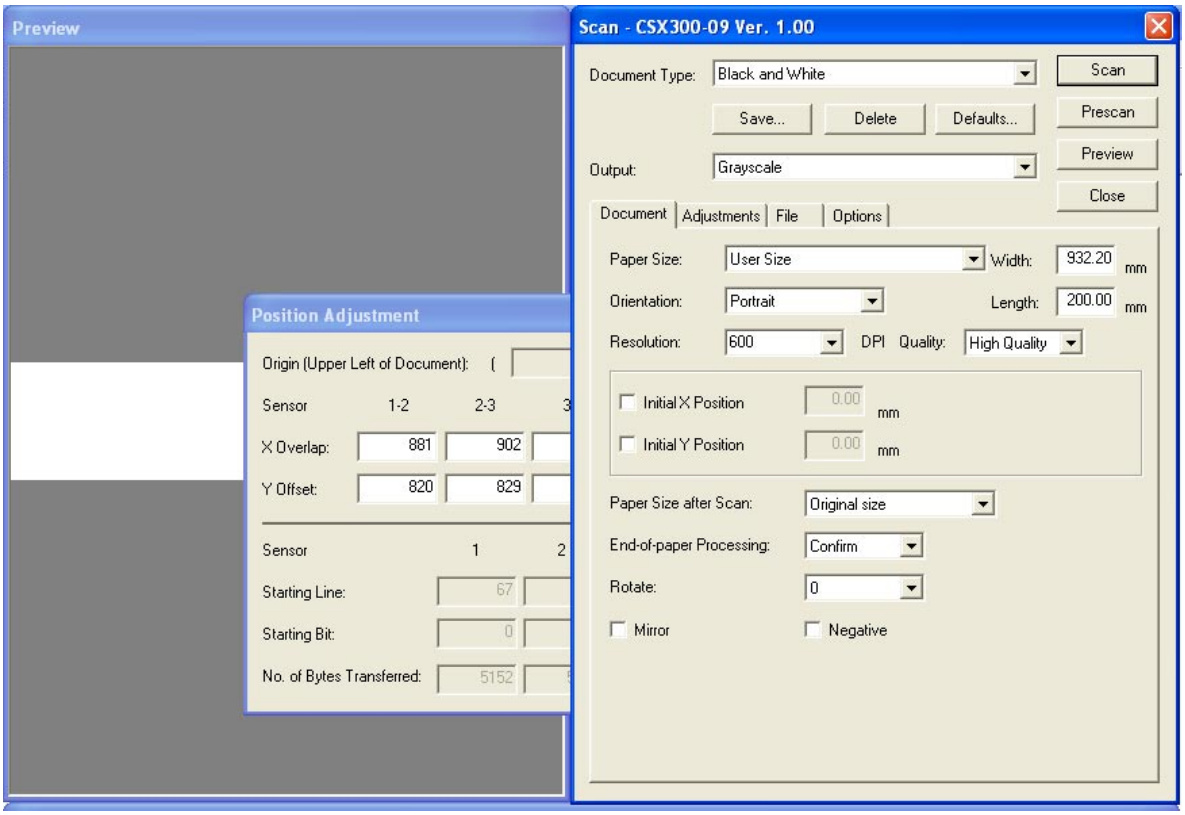
(4) Select "Adjust Position" from the "Adjust" menu.



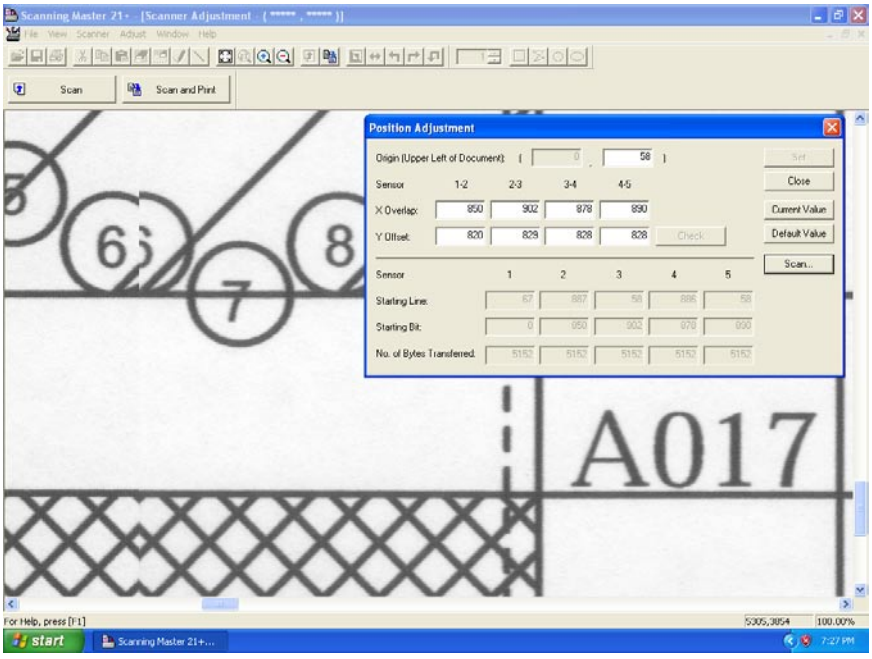
(5) The following dialog box will appear. Confirm that the CSX300 test chart is inserted to the scanner correctly, and then click the "Scan" button.


Position Adjustment
Origin (Upper Left of Document): (0 , 58)
Set
Close
Sensor 1-2 2-3 3-4 4-5
X Overlap: 881 902 878 890
Current Value
Y Offset: 820 829 828 828
Check
Default Value
Scan...
Sensor 1 2 3 4 5
Starting Line: 67 887 58 886 58
Starting Bit: 0 881 902 878 890
No. of Bytes Transferred: 5152 5152 5152 5152 5152

(6) The following dialog box will appear. Click the "Scan" button.

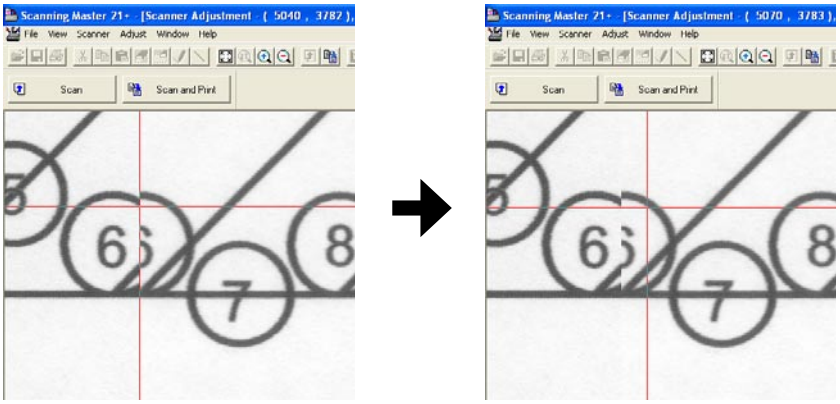


(7) The image appears as shown below.
Then confirm the jointing area of sensors from the A area to E area.
At this time, confirm around 017 lines, because the top part of target is not stable to contact the CIS sensors.



(8) The image appears as shown above with the left-hand portion of the image misaligned with the right-hand portion.
Click anywhere in the X Overlap box under "1-2" (A area).

(9) The crosshairs cursor will appear. First click a position on the left-hand portion, then click the position of the right-hand portion that corresponds to the position you selected first.

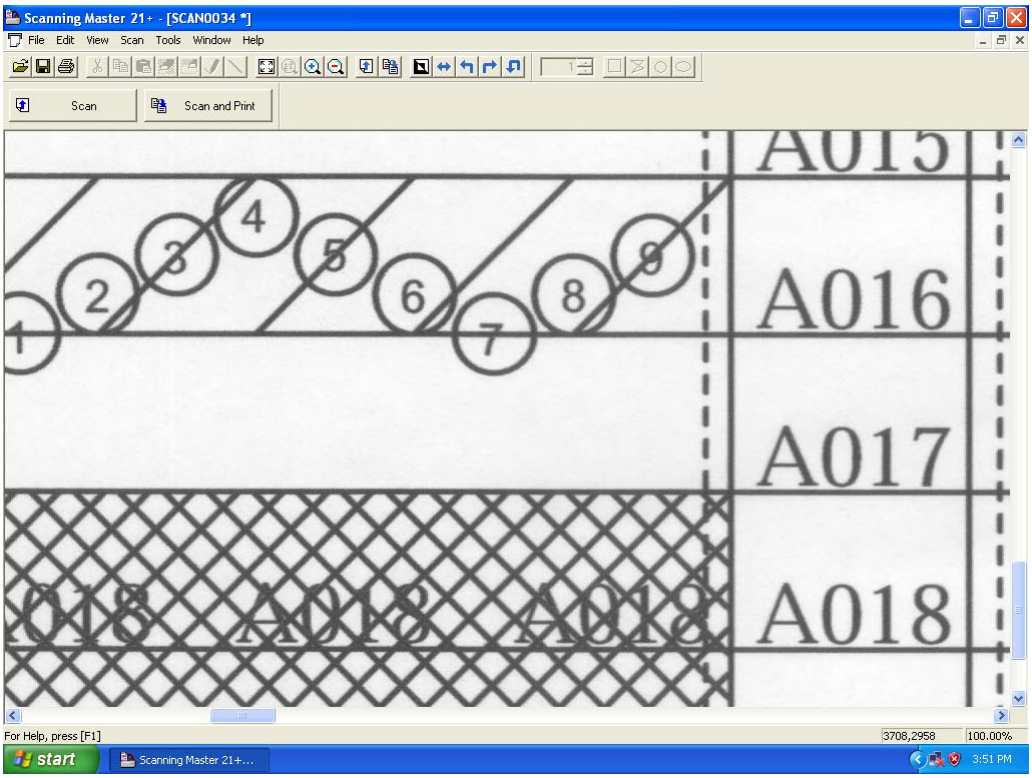


(10) Click the "Check" button first, then click the "Set" button. Follow the on-screen instruction to place the adjustment chart on the scanner again.

(11) Repeat these steps until the left-hand portion is properly aligned with the right-hand portion.
In this task, you need to adjust the X overlap and Y offset at the same time.
See "Tips for Making Fine Adjustments" on the next page if you encounter difficulties making fine adjustments.

(12) Similarly, make adjustments for 2-3 (B area), 3-4 (D area), and 4-5 (E area) in this order if there is misaligned.
After finishing, close all the adjustment menu windows. Use the CSX300 test chart to perform a normal scan, and confirm that the image appears properly.

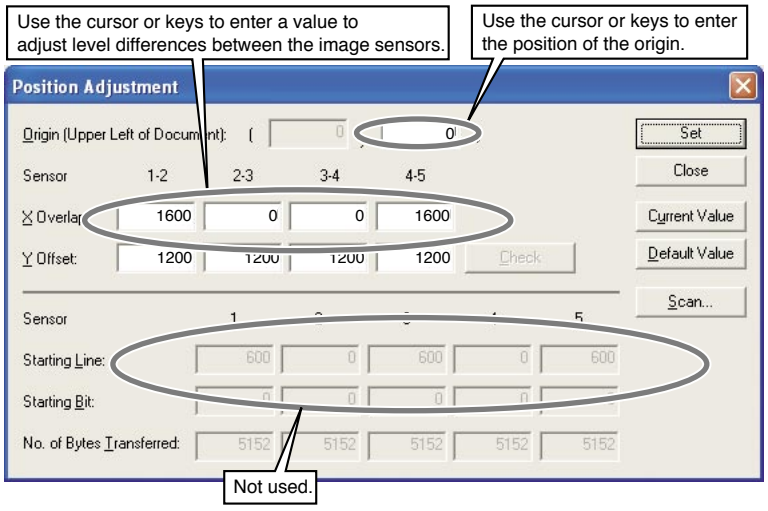
Image after adjustments



Tips for Making Fine Adjustments

• Two portions of the aligned image become misaligned during adjustments using the crosshairs cursor.
• You wish to move a portion of the image by one pixel.
• You find it difficult to find whether any portions of the image are misaligned.
• You feel that some portions of the image remain misaligned, despite efforts to correct the alignment.

In these cases, simply type in numbers to make adjustments.
In this section, we will give you a rough idea of what the numbers in the dialog box mean.
Once you become familiar with the meanings of these numbers and know which numbers to type in, you can make adjustments more accurately and quickly than by using the crosshairs cursor.



9.4.4 Scanning Start Position Adjustment

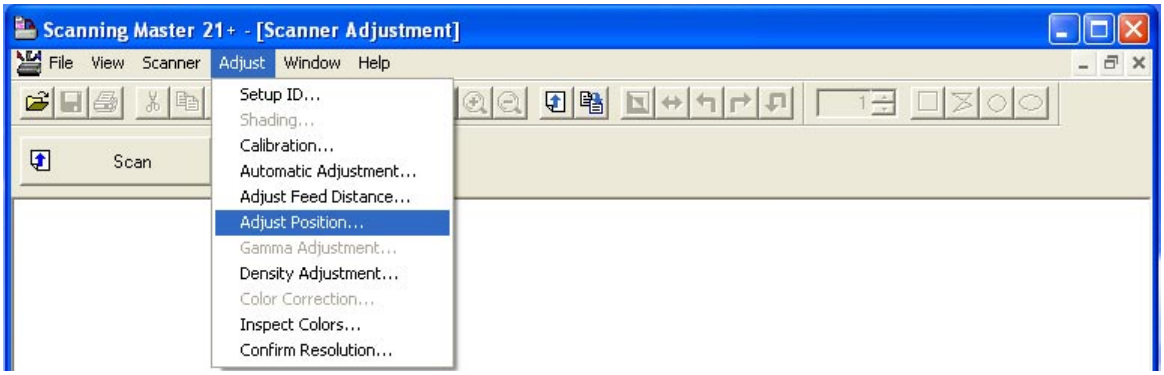
In the following cases, perform this adjustment.

- When the start position is shifted.
- When the stitch of sensors were adjusted by the auto-stitch adjustment.
- When you replaced or removed the paper edge detecting sensor.
- When you replaced the main board.

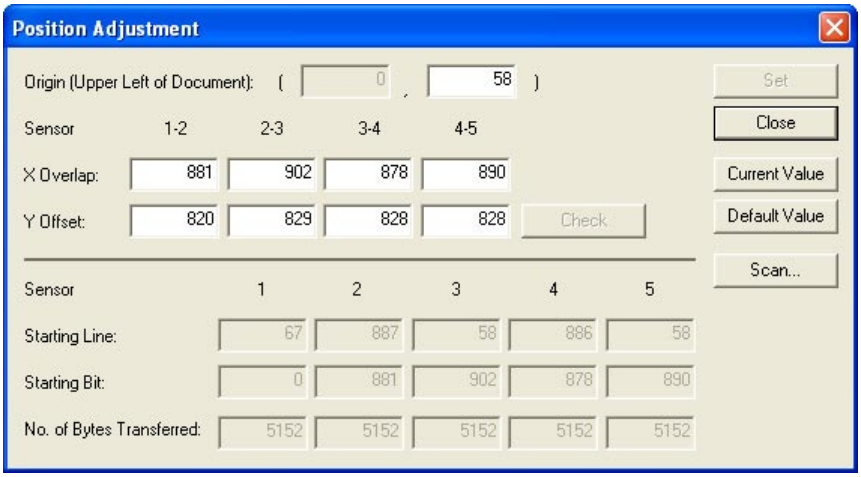
Adjusting the scanning start position (origin adjustment)

(1) Start the OPS112 software. (See p. 9-1.)

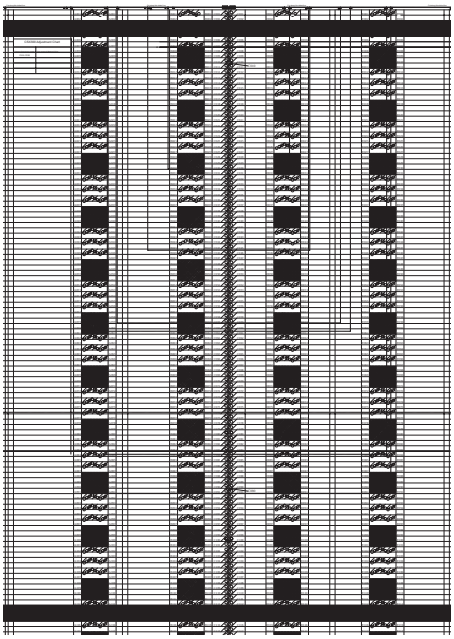
(2) Select "Adjust Position" from the "Adjust" menu.



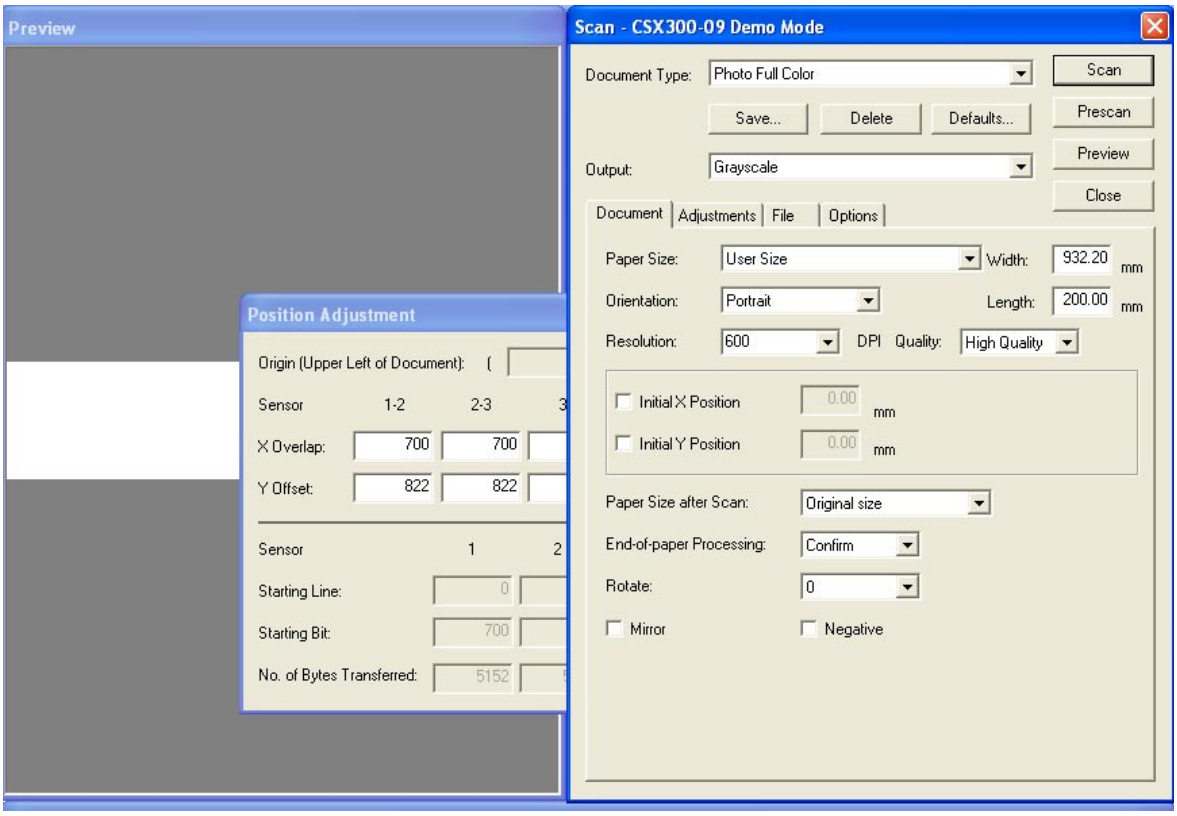
(3) The following dialog box will appear.


Position Adjustment
Origin (Upper Left of Document): (0 , 58)
Set
Close
Sensor 1-2 2-3 3-4 4-5
X Overlap: 881 902 878 890
Current Value
Y Offset: 820 829 828 828
Check
Default Value
Scan...
Sensor 1 2 3 4 5
Starting Line: 67 887 58 886 58
Starting Bit: 0 881 902 878 890
No. of Bytes Transferred: 5152 5152 5152 5152 5152

(4) Correctly insert the CSX300 adjustment test chart into the scanner and click the "Scan" button.



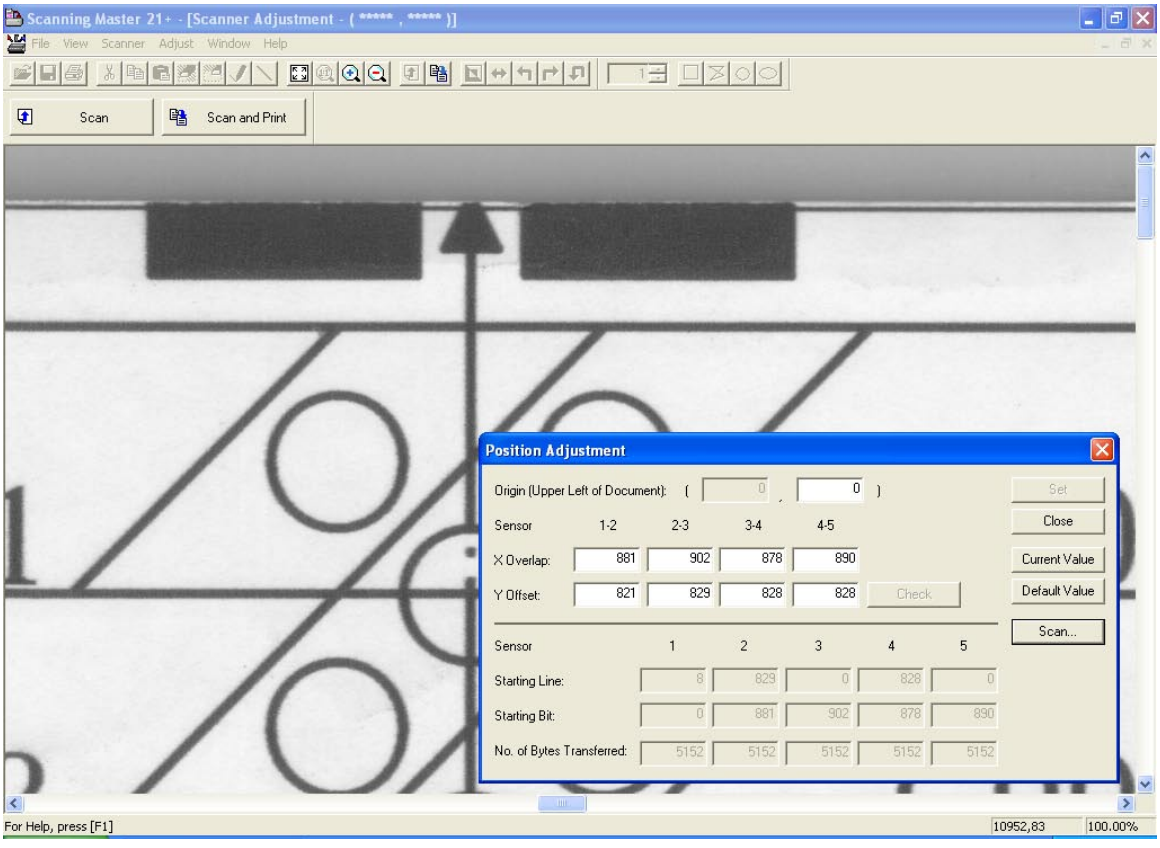
(5) The following dialog box will appear. And confirm the scanning condition. Then click the "Scan" button.



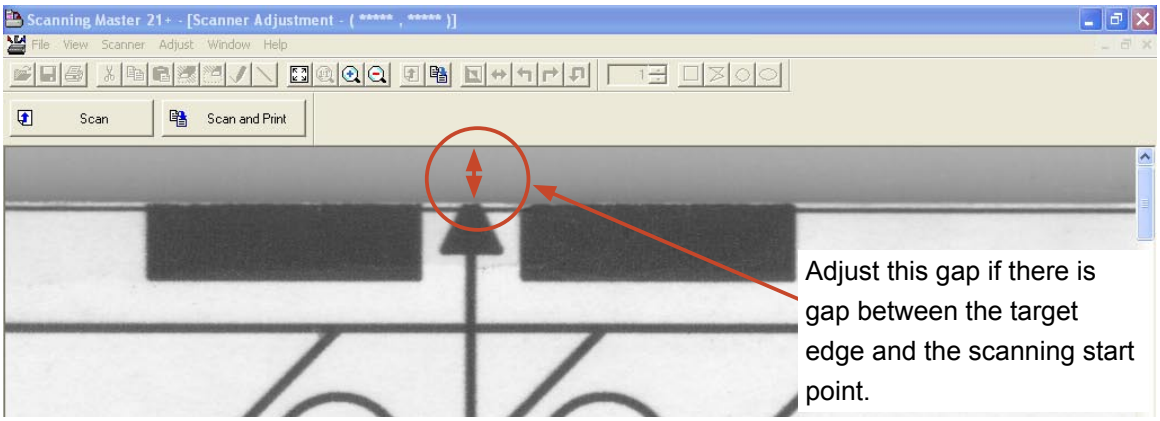
Scan conditions:

"Document Info" Paper Size: User Size, Width: 1066, Length 200, Resolution: 600 dpi
Document Type: Black and White
"Scan Settings" Output: Bilevel

(6) A dialog box appears together with the Scanner Adjustment window, as shown below.

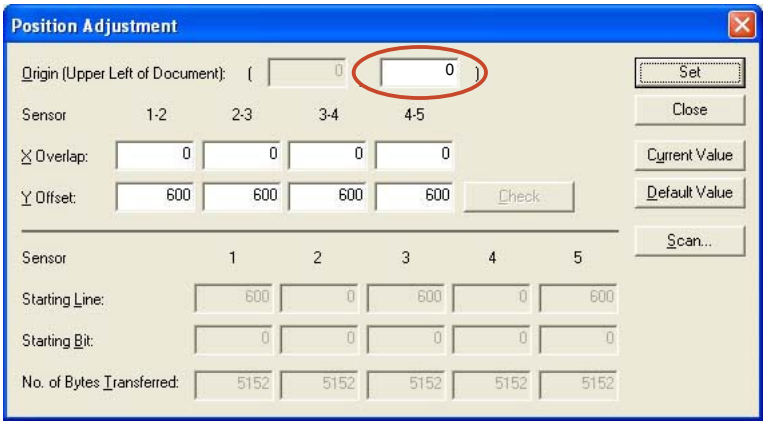

Scanning Master 21+ - [Scanner Adjustment - (***** , *****)]
File View Scanner Adjust Window Help
Scan
Scan and Print
Position Adjustment
Origin (Upper Left of Document): (0 , 0)
Set
Close
Sensor 1-2 2-3 3-4 4-5
X Overlap: 881 902 878 890
Current Value
Y Offset: 821 829 828 828
Check
Default Value
Scan...
Sensor 1 2 3 4 5
Starting Line: 8 829 0 828 0
Starting Bit: 0 881 902 878 890
No. of Bytes Transferred: 5152 5152 5152 5152 5152
For Help, press [F1]
10952,83
100.00%

(6) Check the scanning point of the top center area.


Scanning Master 21+ - [Scanner Adjustment - (***** , *****)]
File View Scanner Adjust Window Help
Scan
Scan and Print
Adjust this gap if there is gap between the target edge and the scanning start point.

(7) Zoom in to the top center area using the zoom button.
If the start point of the scanning is within the top center area as shown below, it does not require offset adjustment.

(8) If the starting point of the scanning is outside of the top center circle, click the Origin box and then input "0".

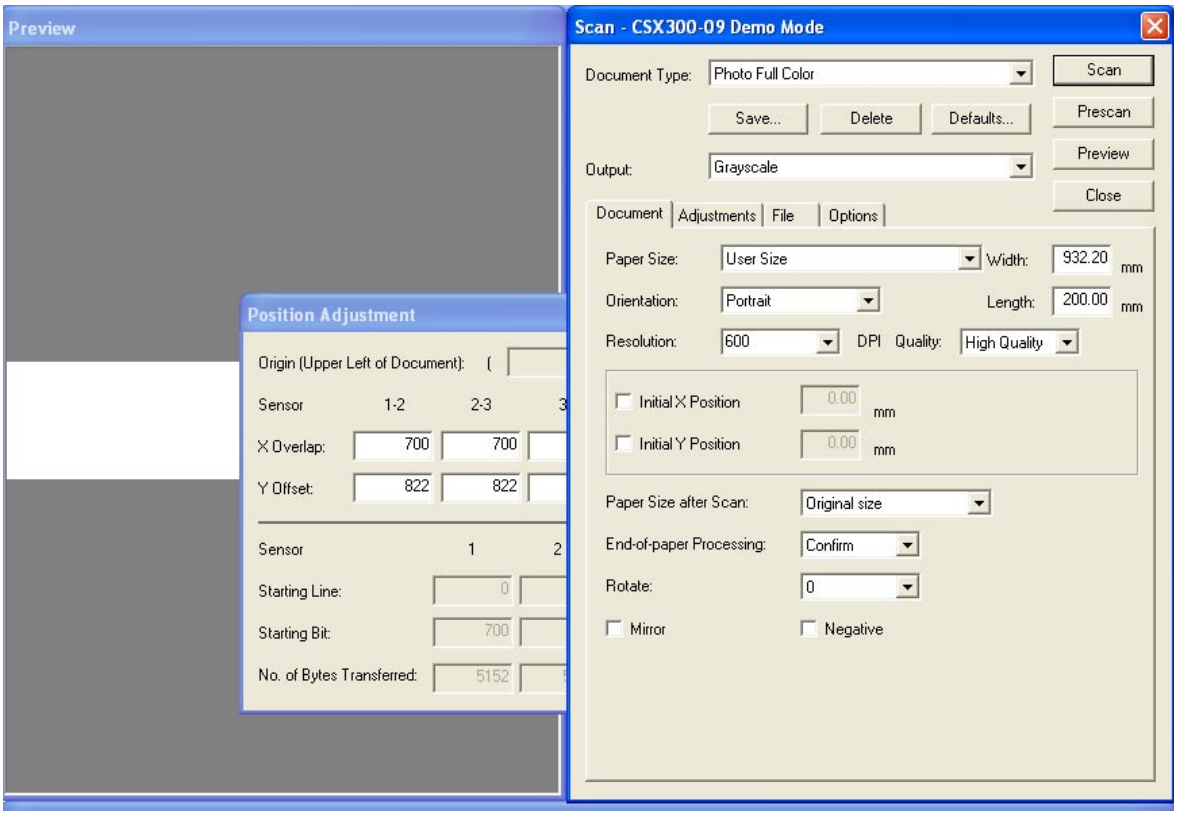

Position Adjustment
Origin (Upper Left of Document): (0 0)
Set
Close
Current Value
Default Value
Scan...
Check
Sensor 1-2 2-3 3-4 4-5
X Overlap: 0 0 0 0
Y Offset: 600 600 600 600
Sensor 1 2 3 4 5
Starting Line: 600 0 600 0 600
Starting Bit: 0 0 0 0 0
No. of Bytes Transferred: 5152 5152 5152 5152 5152

(9) Click the "Check" button, then click the "Set" button. The following dialog box will appear.
Click the "OK" button.

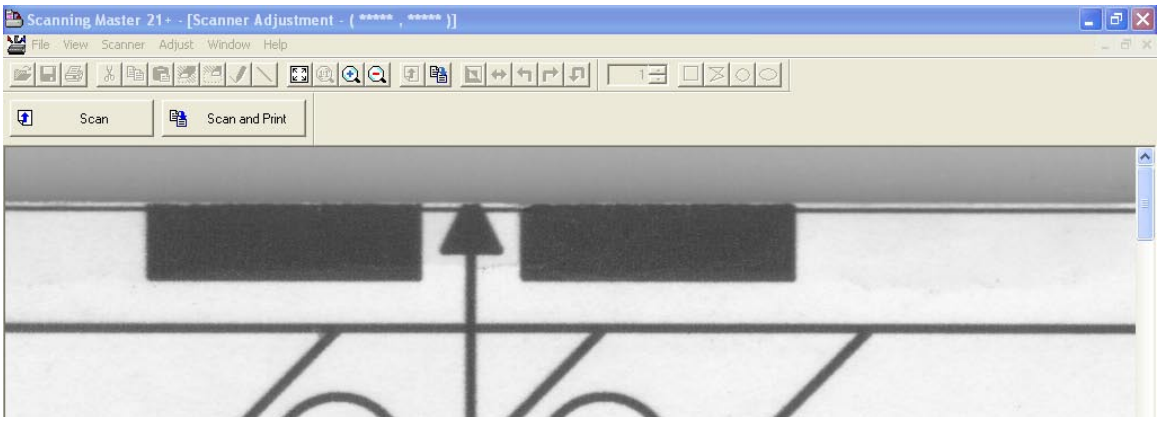
(10) Take out the CSX300 adjustment test chart from the scanner. And then reinsert the CSX300 adjustment test chart to the scanner.

(11) Click the "Scan" button.

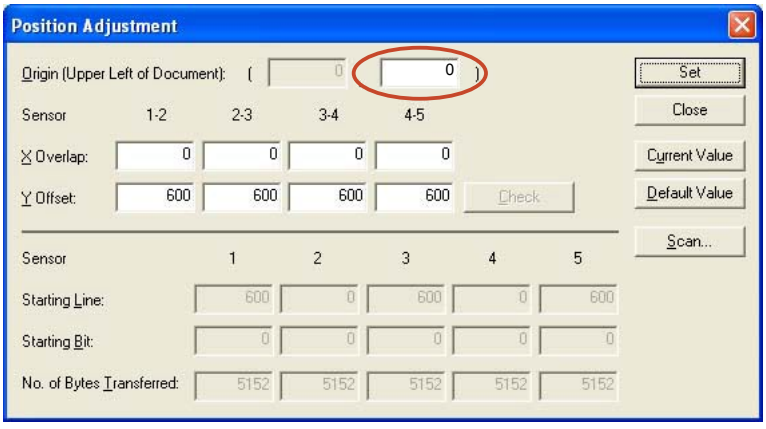
(12) The following dialog box will appear. Then click the "Scan" button.



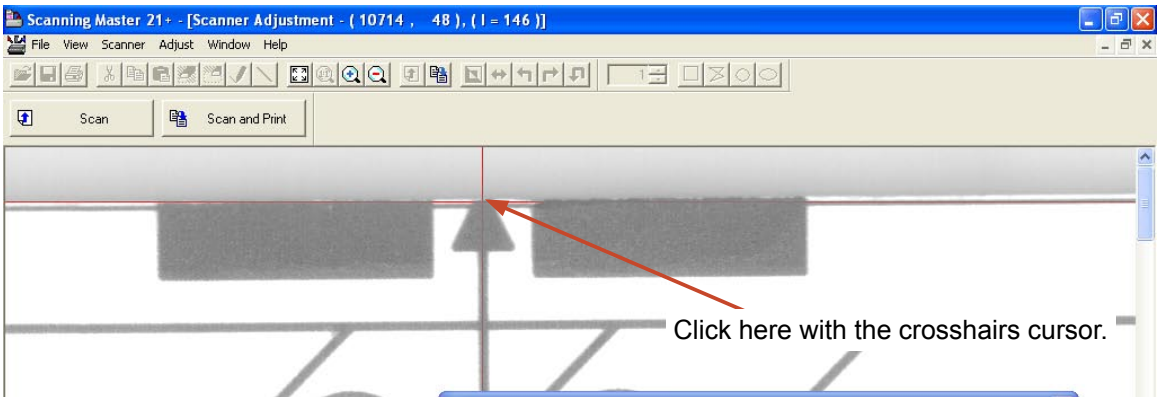
(13) Zoom in to the top center circle using the zoom button.



(14) Click anywhere within the Origin box. The crosshairs cursor appears in the Scanner Adjustment window.



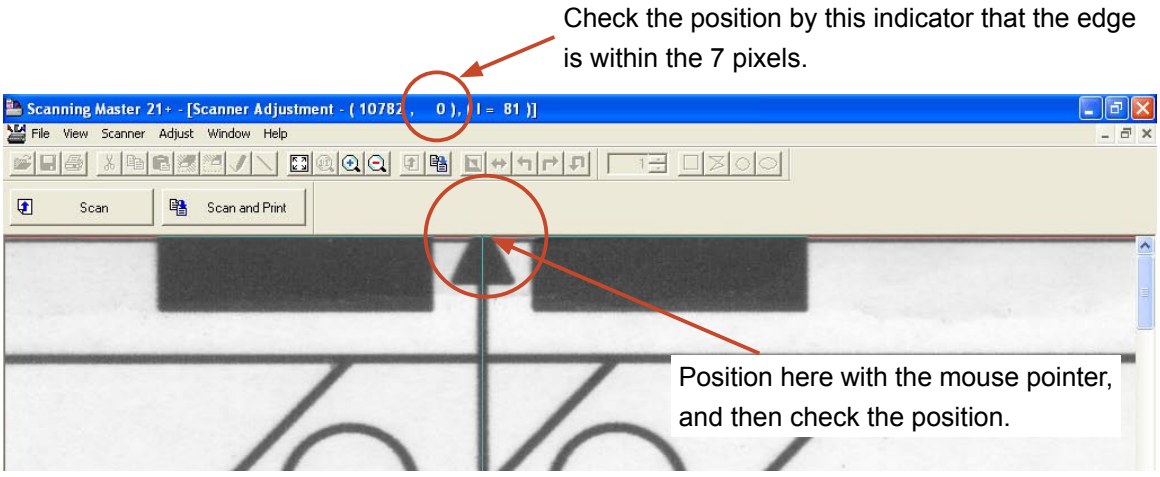
(15) When the crosshairs cursor appears in the Scanner Adjustment window, click on the center of the top center edge with the crosshairs cursor.


Scanning Master 21+ - [Scanner Adjustment - (10714 , 48), (l = 146)]
File View Scanner Adjust Window Help
Scan
Scan and Print
Click here with the crosshairs cursor.

(16) Click the "Check" button, then click the "Set" button. The following dialog box will appear. Click the "OK" button.

(17) Take out the CSX300 adjustment test chart from the scanner. And then reinsert the CSX300 adjustment test chart to the scanner.

(18) Scan the offset target chart again.
Confirm that the starting point of the scanning is within the 7 pixels from the top of window as shown below.


Check the position by this indicator that the edge is within the 7 pixels.
Scanning Master 21+ - [Scanner Adjustment - (10781 , 0), (l = 81)]
File View Scanner Adjust Window Help
Scan
Scan and Print
Position here with the mouse pointer, and then check the position.

9.5 Downloading Firmware

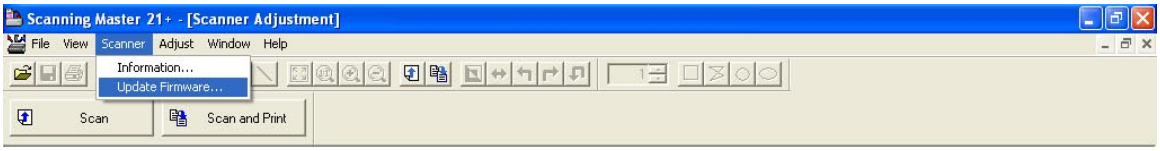
This section describes how to download firmware (system programs) via the USB interface to the flash memory provided on the data controller board, to which the boot program has been downloaded.

1. Items required to download firmware

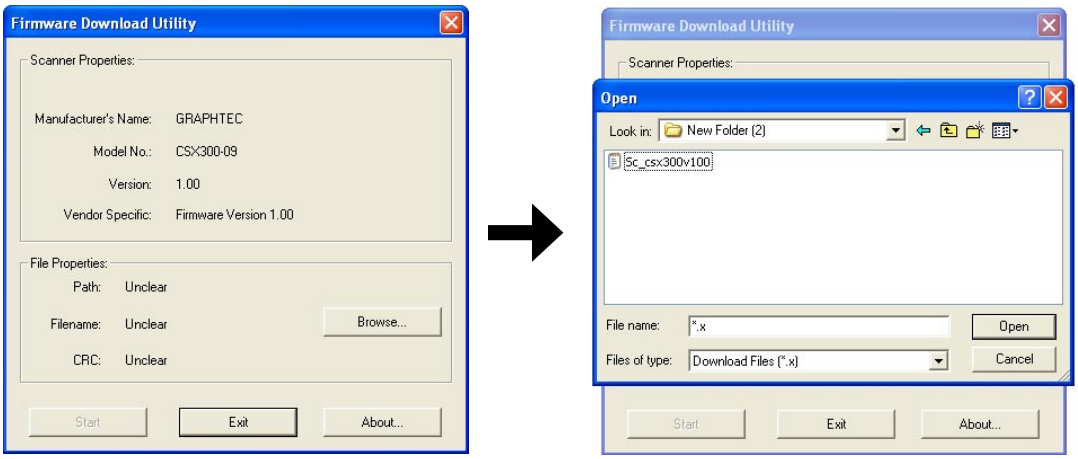
- Sc_csx300vXXX.x file (Firmware)
- CSX300-09 scanner
- PC (Windows 2000/XP and an operating environment that provides USB 2.0 compatibility)
- OPS112 (Scanning Master 21+ Ver 6.40 or later)
- USB interface cable

2. Procedure

(1) Use the USB cable to connect the CSX300-09 and PC.
(2) Turn on the power for your PC.
(3) Run the Scanning Master 21+ (OPS112) in the adjustment mode. (see Section 9.1).
(4) When OPS112 starts, follow the steps given below to download the firmware.
(5) Select "Update Firmware" from the "Scan" menu to display the Download dialog box.



(6) Insert the floppy disk containing the firmware (filename: Sc_csx300vXXX.x) into the floppy disk drive, click the "Browse" button on the Firmware Download dialog box, select the Sc_csx300vXXX.x, and click the "Open" button.



(7) Click the "Start" button to begin downloading.
(8) After the download is complete, a message will appear. At this time, the paper and error LEDs on the scanner should start flashing simultaneously.
After confirming this, turn off the power.

10. TROUBLESHOOTING

10.1 TROUBLESHOOTING

Cause	Checkpoint	Remedy
Lamps on the control panel remain unlit.	Confirm that the power switch has been switched on.	Switch on the power switch.
	Confirm that the power cable is properly connected.	Connect the cable properly.
	Confirm that the cable is properly connected to the control device.	Connect the cable properly.
	Confirm that the power outputs (+24 V, +5 V, +3.3 V) are appropriate.	Check the power supplies and replace if necessary.
	Other	Replace the control panel. Replace the data controller board.
The document is not scanned, although it is moved to the scanning position.	Confirm that the PAPER LED is lit.	Check the document detection photosensor.
	Confirm that the USB cable is properly connected.	Connect the cable properly.
	Confirm that the USB cable is properly connected within the scanner.	Connect the cable properly.
	Confirm that the appropriate model has been specified.	Specify the correct scanner model.
	Other	Replace the main control board.
The document is not transported properly.	Check for foreign objects in the document scanning section.	Open the center cover and remove foreign objects.
	Confirm that the roller rotates when you press a control key.	Check for anomalies around the control boards.
	Confirm that the feed motor is running.	Check for anomalies around the motor.
	Confirm that +24 V is output.	Check the power supply and replace if necessary.
	Other	Replace the control boards. Replace the data control board.
The scanned data is completely black.	Confirm that an appropriate white correction value has been specified.	Perform Calibration (white correction).
	Confirm that the image sensor cables are properly connected.	Confirm that the image sensor cables are properly connected, with no broken wires.
	Confirm that the image sensor LEDs are lit.	Check the +5 V power supply and replace it if it is faulty. Replace the data controller board. Replace the CIS board. Replace the image sensors.
	Confirm that an appropriate value is specified for “Intensity (Brightness)” in Scanning Master 21+.	Adjust “Intensity (Brightness)” in Scanning Master 21+.

Cause	Checkpoint	Remedy
The scanned drawing has undesired black lines.	Clean the contact glass plates and replace if necessary.	Clean the contact glass plates and replace if necessary. Clean the image sensors.
	Confirm that calibration (white correction) has been properly performed.	Perform calibration from the beginning (white correction).
	Check the document hold-down plate for stains.	Clean the feed rollers.
	Check whether the problem persists after cleaning and adjustments.	Replace the image sensors.
The scanned drawing has undesired white lines.	Check the contact glass plates for dust and damage.	Clean the contact glass plates and replace if necessary.
	Confirm that calibration (white correction) has been properly performed.	Perform calibration from the beginning (white correction).
Part of the scanned drawing is missing (the scanned drawing is horizontally compressed).	Confirm that the sensor X overlaps and Y offsets are appropriate.	Align the sensor joints.
Part of the scanned drawing is overlapped.	Confirm that the sensor X overlaps and Y offsets are appropriate.	Align the sensor joints.
The image quality is poor.	Check whether any of the contact glass plates is dirty.	Use purified water or alcohol to clean the contact glass plate(s). (Do not use chemical solvents.)
	Confirm that the image resolution is appropriate.	Select an appropriate resolution.
The PC does not detect the scanner.	Confirm that the scanner has been turned on.	Turn on the scanner.
	Confirm that the PC has detected the USB properly.	Reattach the USB cable, set it up, and reinstall the USB driver.
	Check the cable for broken wires, shorting, and bent connector pins.	Replace the cable.
	Confirm that the power supply for the scanner unit functions properly.	Check the supply voltage and replace the power supply as necessary.
When placed on the scanner, the paper is moved beyond the scanning section and drops to the back of the scanner.	The media sensors do not function properly.	Clean the media sensor. Check the sensor cable for contact with other cables. Replace one or both media sensors.
Paper jam occurs.	Check the transfer section for foreign objects.	Remove foreign objects.
There is a difference in color density between the right- and left-hand portions of the document scanned in grayscale.	The sensor color density has not been properly corrected.	Adjust color density.
	Confirm that calibration (white correction) has been properly performed.	Perform calibration from the beginning (white correction).

11. OPTION AND CONSUMABLES

11.1 Optional Item

Item	Model
A0 stand with basket	ST0074

11.2 Consumables

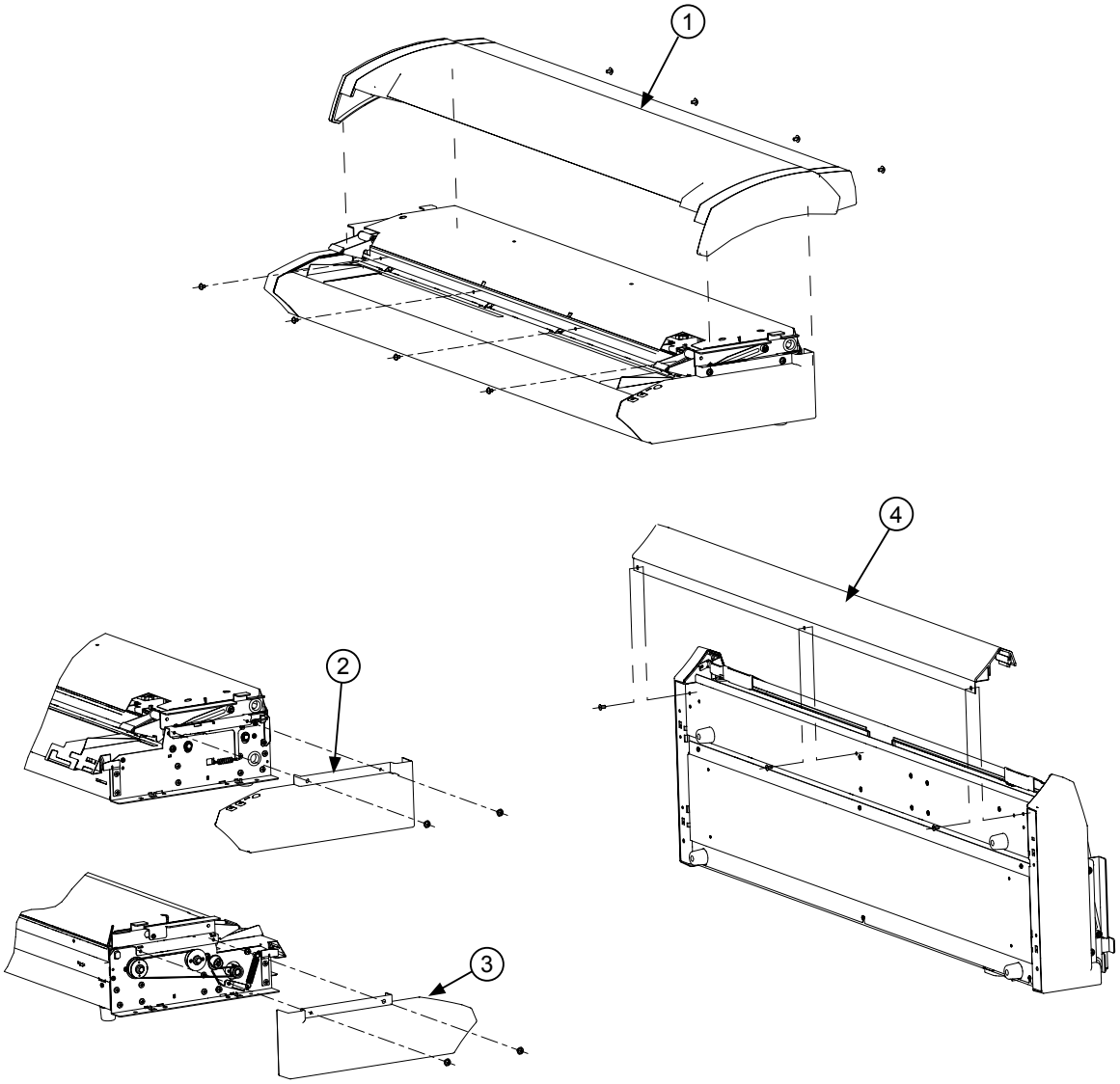
Item	Model
Carrier Sheet A0	IS0922
Carrier Sheet A1	IS0908
Calibration Sheet	IS0925
Cleaning paper (50 sheets)	EM-CP

12. PARTS LISTS

12.1 Outer Casing

No.	Part No.	Part name	Description	Q'ty	Remarks	SR
1	641710500	Top_Cover	COVER MD G6	1		C
2	444063620	Left_Side_Cover A	COV L ASSY G6	1		C
3	444063600	Right_Cover_A	COV R ASSY G	1		B
4	444063590	Front_Cover_A	Front_Cover_ASSY	1		C

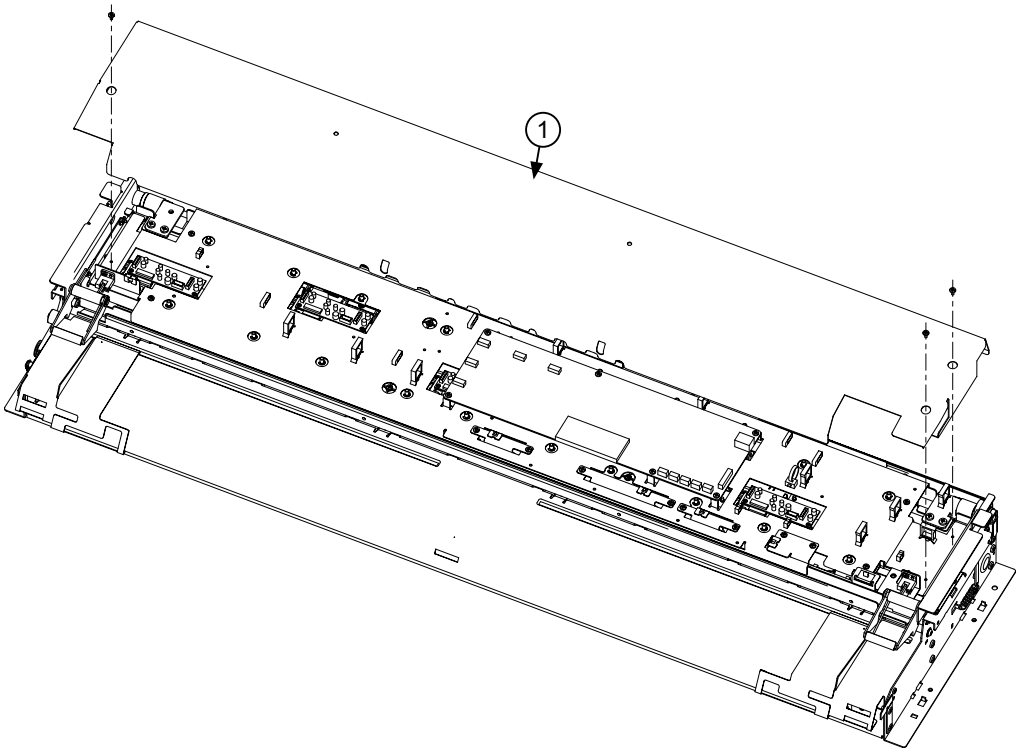
Outer Casing



12.2 Shield Cover

No.	Part No.	Part name	Description	Q'ty	Remarks	SR
1	444063632	Sheiled Cover Assy		1		C

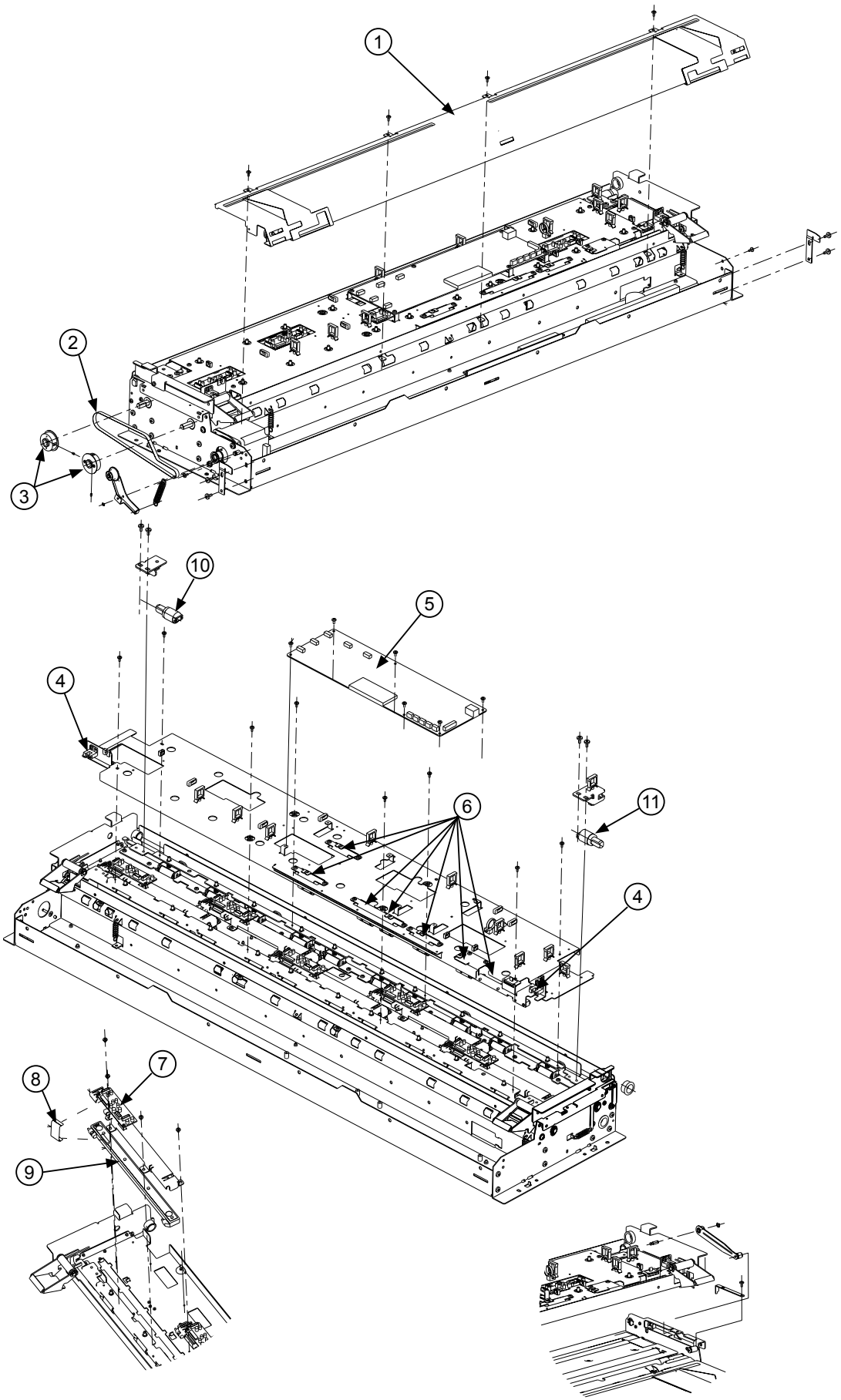
Shield cover



12.3 Main Frame

No.	Part No.	Part name	Description	Q'ty	Remarks	SR
1	774063120	Sheet_Guide_A	L1 Sheet_Guide_ASSY	1		C
2	378020521	Timming_Belt	BELT60S2M410	1		B
3	444063770	Feed Drive Pulley		2		B
4	561080012	Cover_Sensor	KI1391-AALF	2		A
5	444063052	SVC_Main_BD_S	Data Controller Board	1		A
6	561080004	Media_Sensor	PS117ED1	7		A
7	444063011	SVC_CIS_BD	CIS Controller Board	5		A
8	694450111	FPC_Cable	FPC Cable CS20A	5		A
9	444063900	CIS Sensor A, (Rank A)	Select the same rank of sensor that is used in your scanner.	5		A
	444063910	CIS Sensor B, (Rank D)				
	444063920	CIS Sensor C, (Rank C)				
	444063930	CIS Sensor D, (Rank D)				
	444063940	CIS Sensor E, (Rank E)				
	444063950	CIS Sensor F, (Rank F)				
	444063960	CIS Sensor G, (Rank G)				
	444063970	CIS Sensor H, (Rank H)				
	444063980	CIS Sensor I, (Rank I)				
	444063990	CIS Sensor J, (Rank J)				
	444064000	CIS Sensor K, (Rank K)				
	444064010	CIS Sensor L, (Rank L)				
	444064020	CIS Sensor M, (Rank M)				
	444064030	CIS Sensor N, (Rank N)				
	444064040	CIS Sensor O, (Rank O)				
	444064050	CIS Sensor P, (Rank P)				
10	305704002	Dumper_L	Dumper L, FYN-N1-L304	1		C
11	305704003	Dumper_R	Dumper R, FYN-N1-R303	1		C

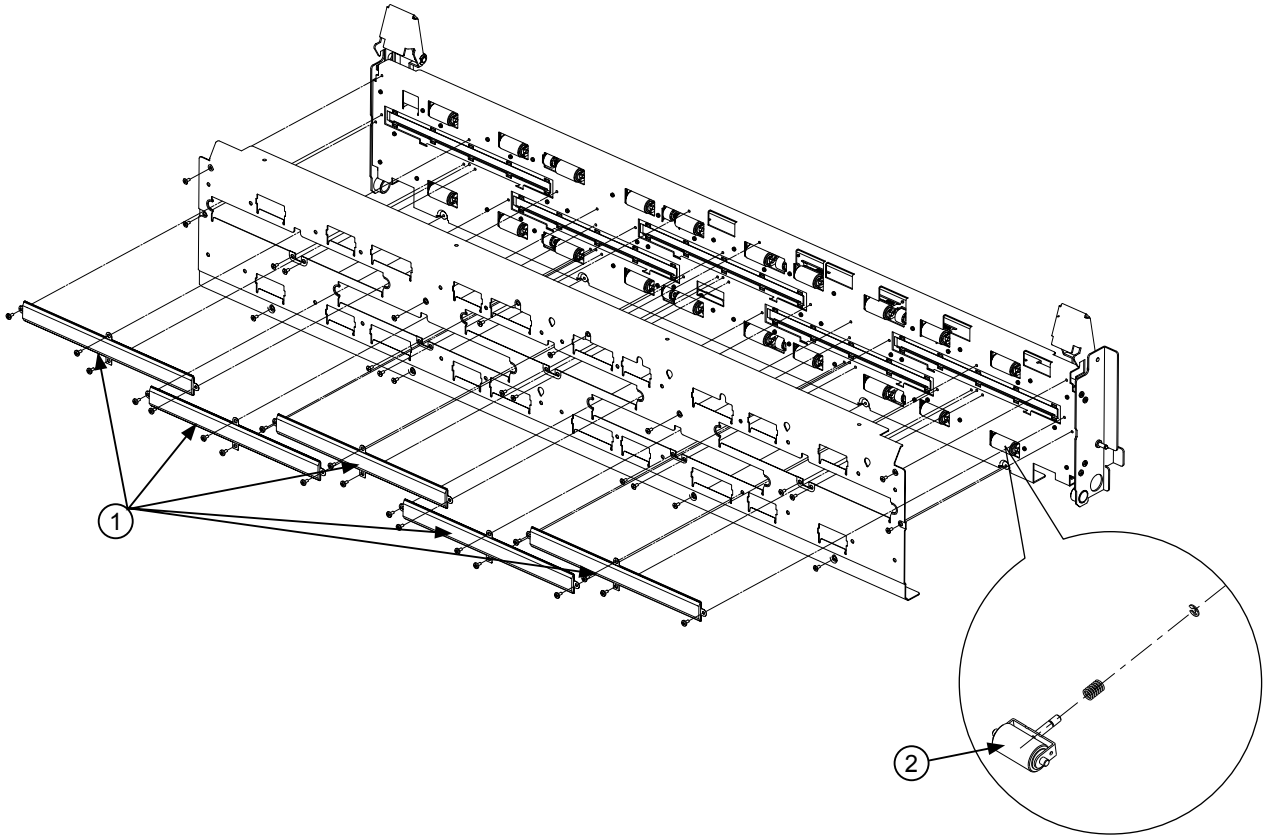
Main Frame



12.4 Top Frame Bottom

No.	Part No.	Part name	Description	Q'ty	Remarks	SR
1	444063820	Scan_Glass_A	Scan_Glass_Assy	5		A
2	444063720	Pinch_Roller_A	Pinch_Roller_Assy	20		B

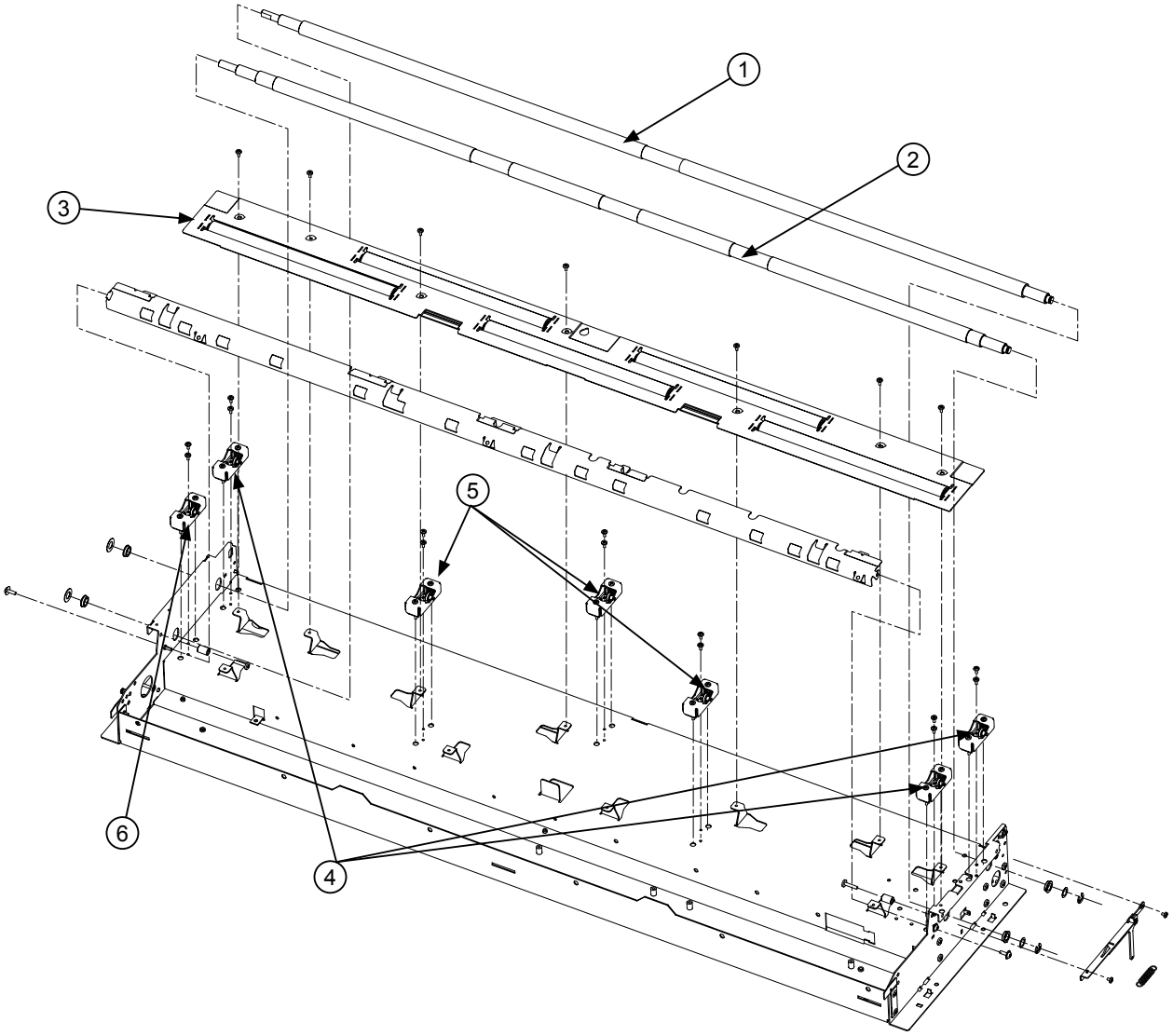
Top Frame Bottom



12.5 Feed Section

No.	Part No.	Part name	Description	Q'ty	Remarks	SR
1	641710011	Feed_Roller_R		1		B
2	641710001	Feed_Roller_F		1		B
3	444063674	Press_Roller_A	L2 ASSY	1	With Rollers	B
4	444063733	Press_A_2	PRS ASSY12	3		C
5	444063753	Press_A_1	PRS ASSY	3		C
6	444063393	Press_A_3	PRS ASSY HI	1		C

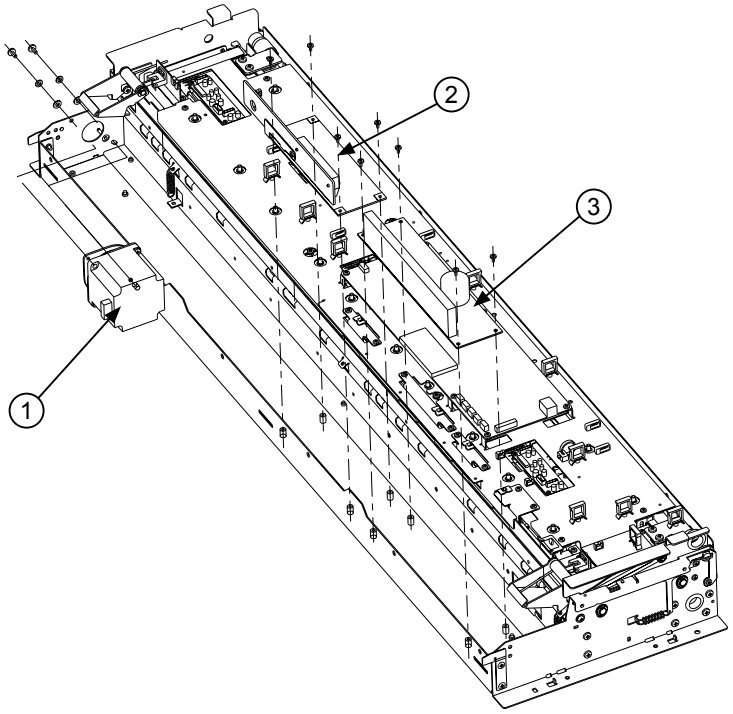
Feed Section



12.6 Bottom Chassis

No.	Part No.	Part name	Description	Q'ty	Remarks	SR
1	444063790	Motor_Assy		1		B
2	444063080	SVC_PWR_BD		1		B
3	694600780	Power_Supply	Power Supply, LPS-75-24	1		B

Bottom Chassis



12.7 Harness

No.	Part No.	Part name	Description	Q'ty	Remarks	SR
1	694601001	Harness 0	CA702400A	1	Main Power Cable	C
2	694601010	Harness 1	CA702401	6	CIS Power Cable	C
3	694601021	Harness 2	CA702402A	1	Motor Control Cable	C
4	694601030	Harness 3	CA702403	1	Motor Cable	C
5	694601041	Harness 4	CA702404A	1	Front /Rear/Cover Sensor 1	C
6	694601051	Harness 5	CA702405A	1	24V Power Cable	C
7	694601060	Harness 6	CA702406	1	Main-CIS Data Cable J20	C
8	694601070	Harness 7	CA702407	1	Main-CIS Data Cable J21	C
9	694601080	Harness 8	CA702408	1	Main-CIS Data Cable J22	C
10	694601090	Harness 9	CA702409	1	Main-CIS Data Cable J23	C
11	694601100	Harness 10	CA702410	1	Main-CIS Data Cable J24	C
12	694601111	Harness 11	CA702411A	1	Power Save Cable	C
13	694601121	Harness 12	CA702412A	1	Operation Panel Cable	C
14	694601130	Harness 13	CA702413	3	Paper Width Sensor Cable	C
15	694601140	Harness 14	CA702414	1	Paper Width Sensor Cable 18inch	C
16	694601150	Harness 15	CA702415	1	Paper Width Sensor Cable 36inch	C
17	694601170	Harness 17	CA702417	1	Cover 2 Sensor Cable	C
19	694600543	Harness 19	CA504103C	1	POWER-SW	C
20	694600562	Harness 20	CA504105B	1	Inlet-FG	C
21	694600581	Harness 21	CA504107A	1	Inlet-SW	C
22	694600242	Harness 22	CA460024B	1	Inlet-Upper Unit FG	C
23	694450111	FPC_Cable	FPC Cable CS20A	5	CIS-CIS_BD	A
24	694600610	USB_Cable_0.8	Internal USB Cable	1		C

12.8 Inlet

No.	Part No.	Part name	Description	Q'ty	Remarks	SR
1	444063140	SVC_USB_RLY	USB Relay Board	1		C
2	500051793	Inlet	FN-922R-3-06	1		C

12.9 Other Parts

Standard Accessories

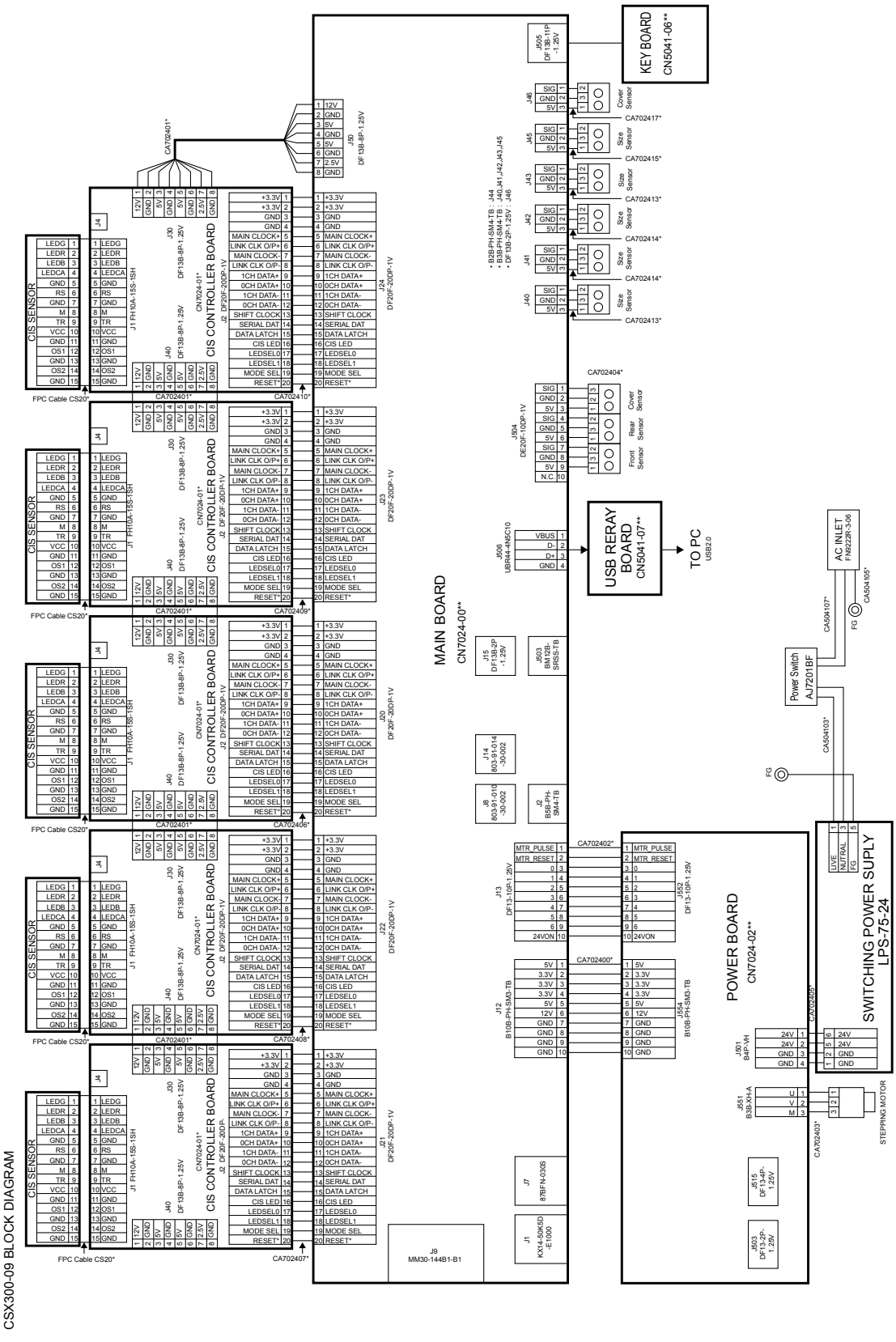
No.	Part No.	Part name	Description	Q'ty	Remarks	SR
1	562500003	USB Cable	CBL0106-ACL2-29M	1		C
2	641600863	CS400-CDM 21M	CD-ROM	1		C
3	444063891	Calibration Sheet Assembly		1		A
4	641711641	SUPPORT-PLATE		3		C
5	641700501	Cleaning-Kit		1		C
6	641711330	CSX300-UM-151	User's Manual	1		C

Packing Box

No.	Part No.	Part name	Description	Q'ty	Remarks	SR
1	444063880	CSX Packing Box Assembly		1		C

13. BLOCK DIAGRAM AND CIRCUIT DIAGRAMS

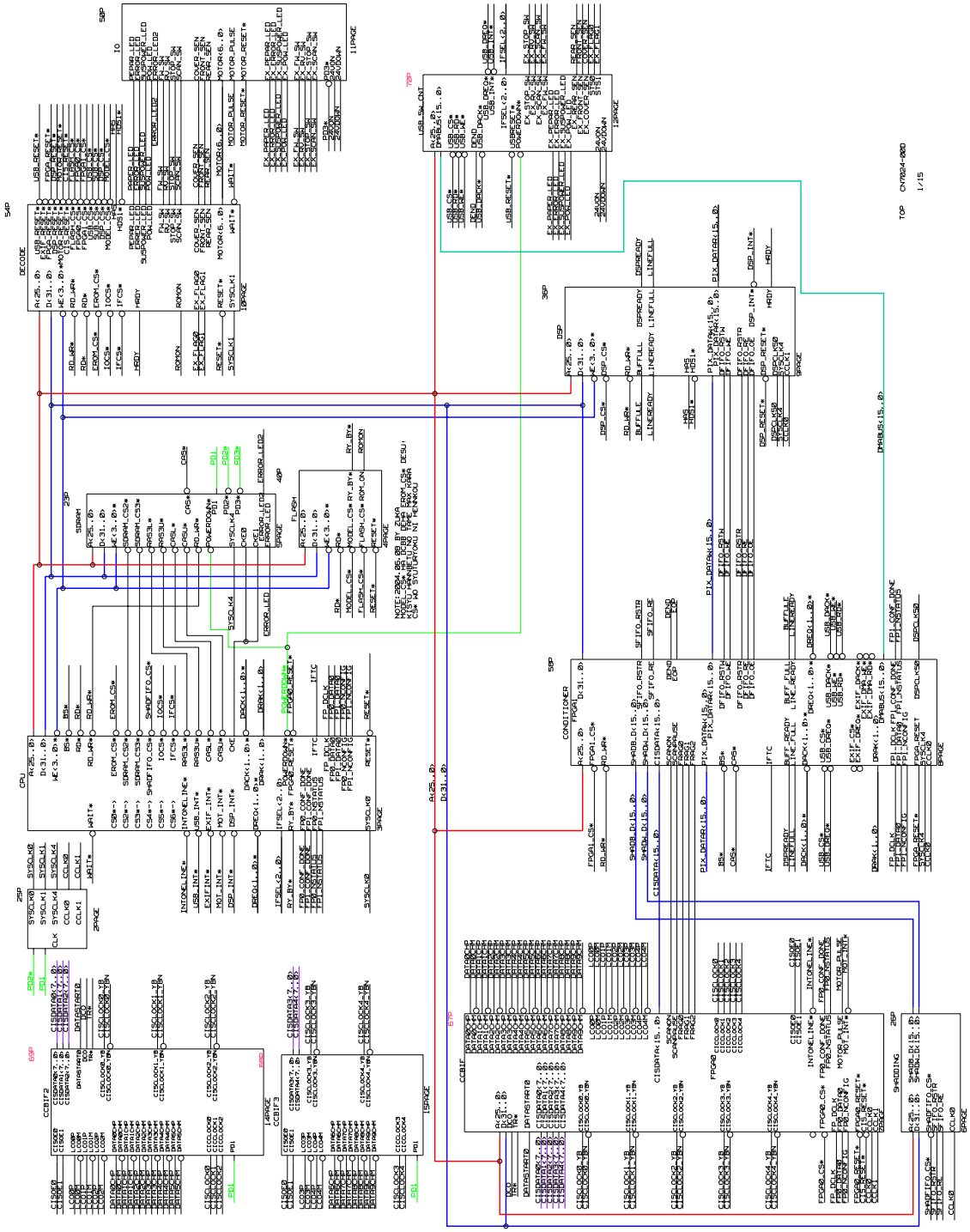
13.1 Block Diagram



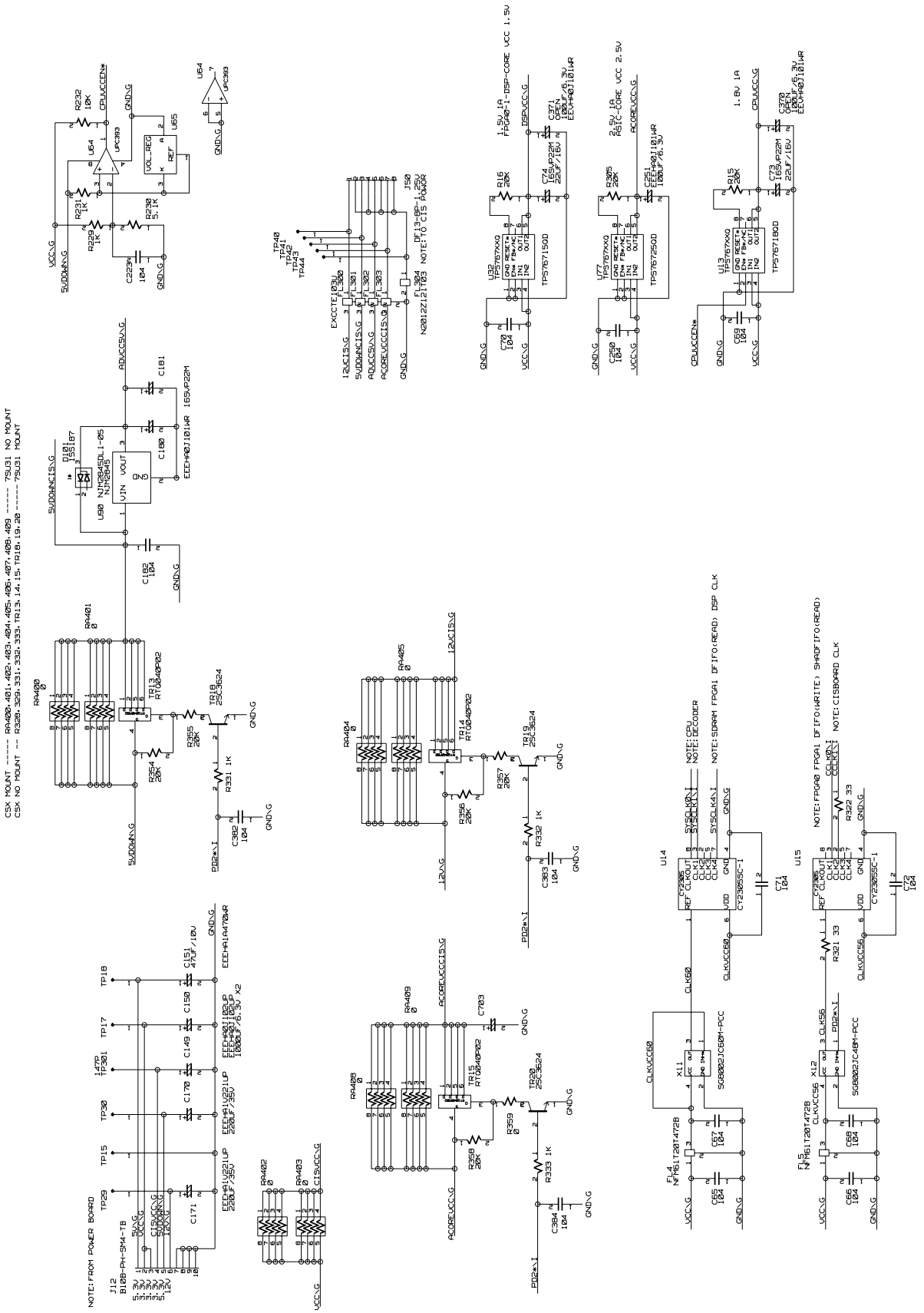
13.2 Circuit Diagrams

13.2.1 Data Controller Board (Main Board)

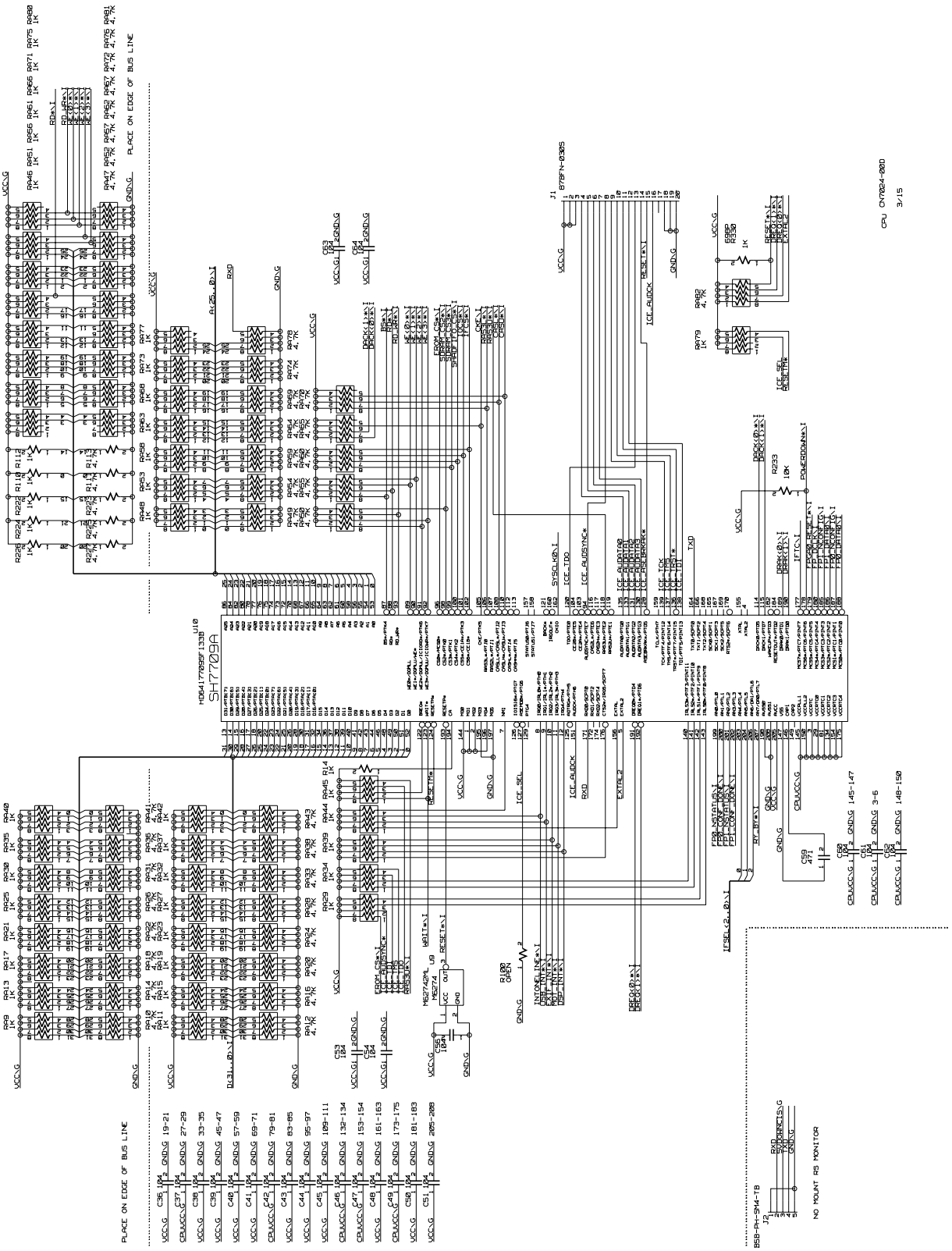
Data Controller Board, CN7024-00 (1/15)



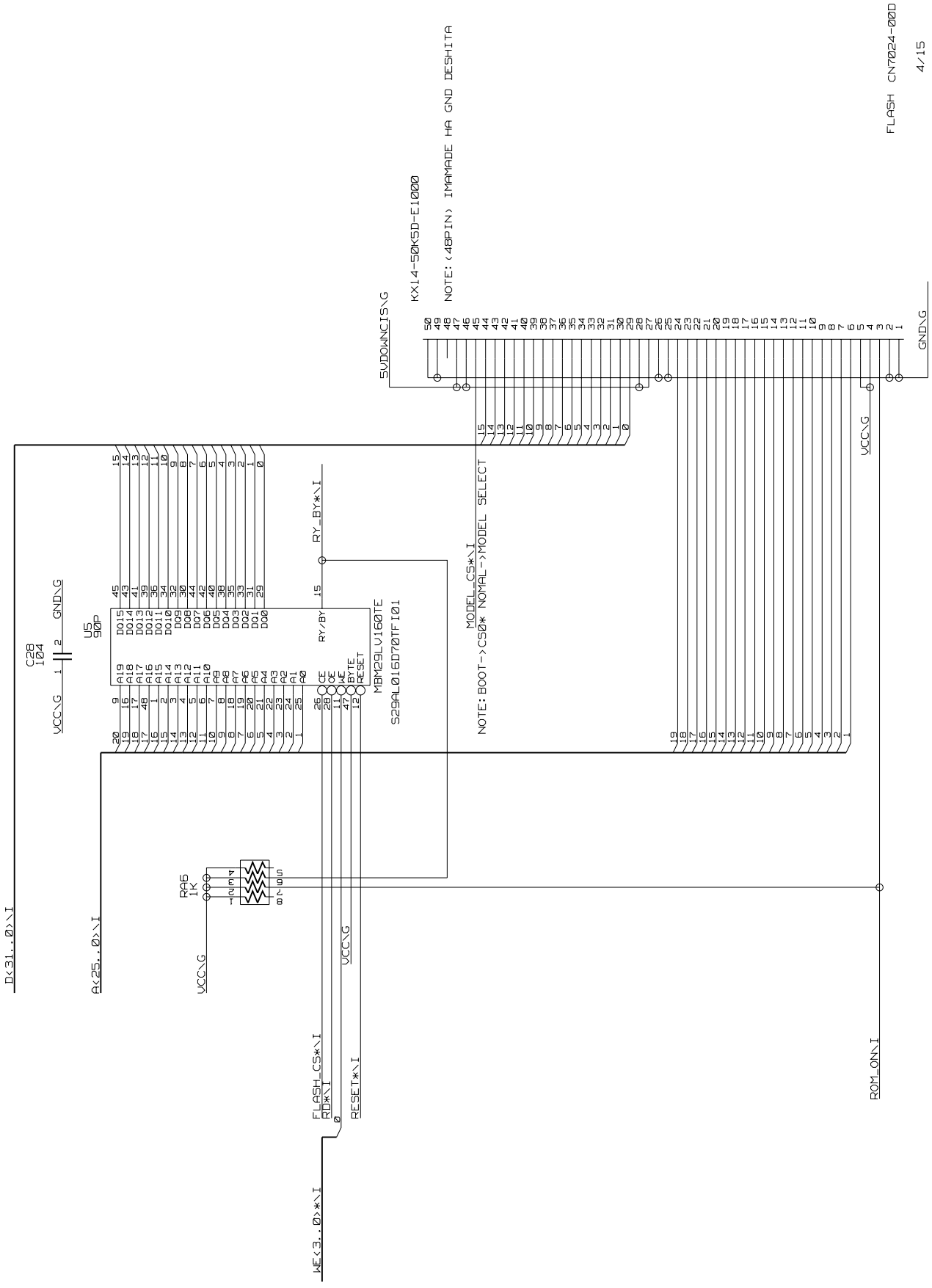
Data Controller Board, CN7024-00 (2/15)



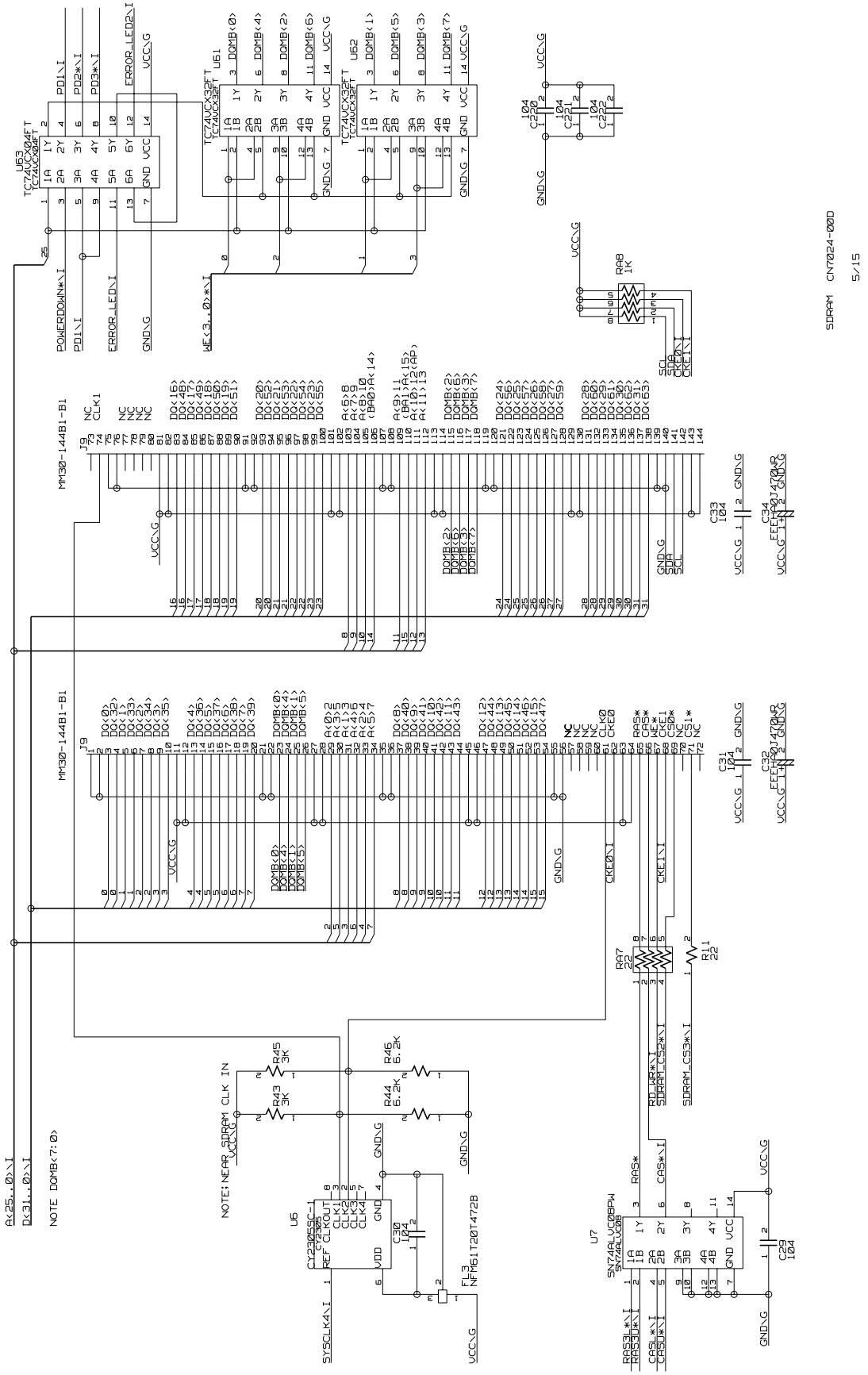
Data Controller Board, CN7024-00 (3/15)



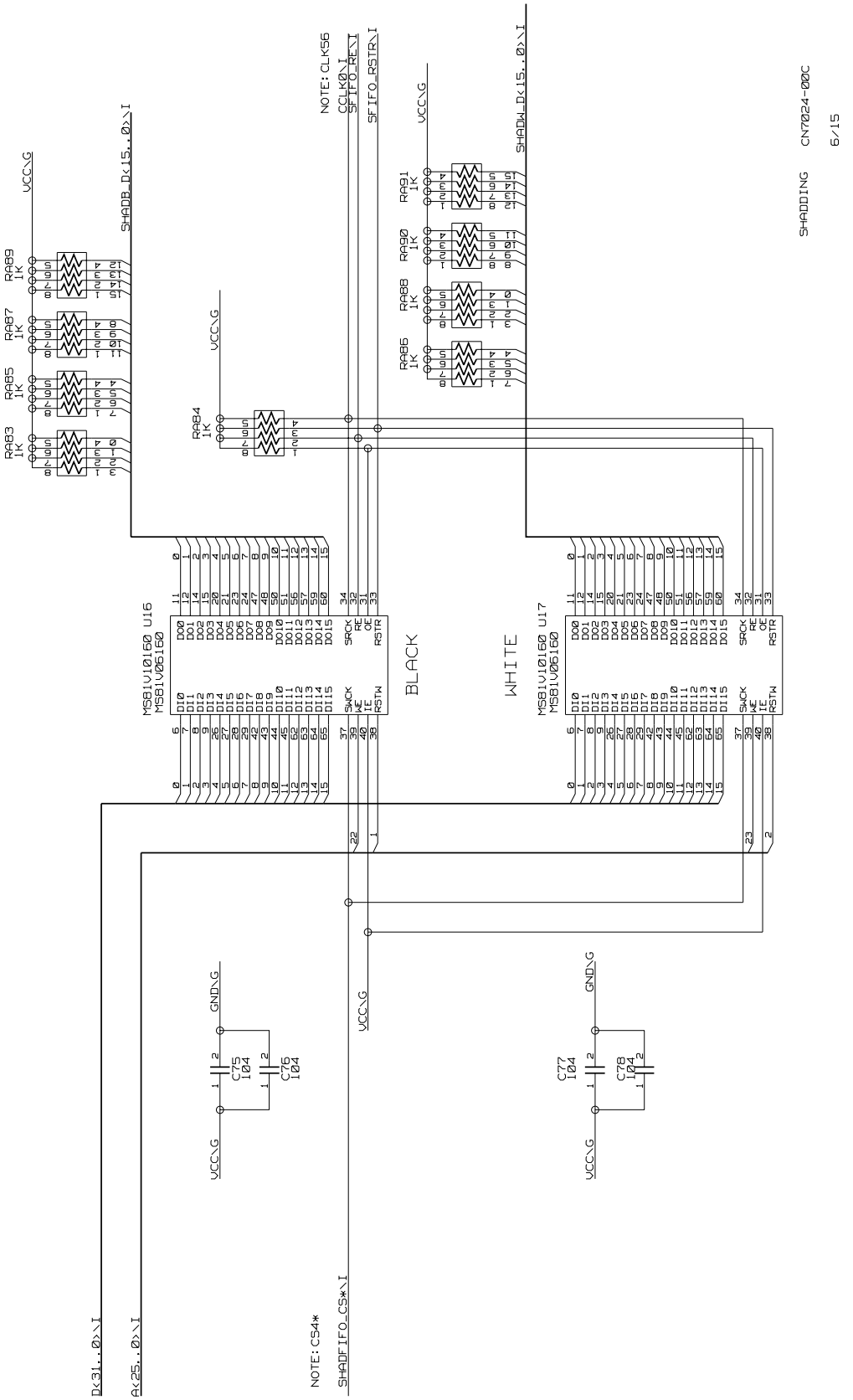
Data Controller Board, CN7024-00 (4/15)



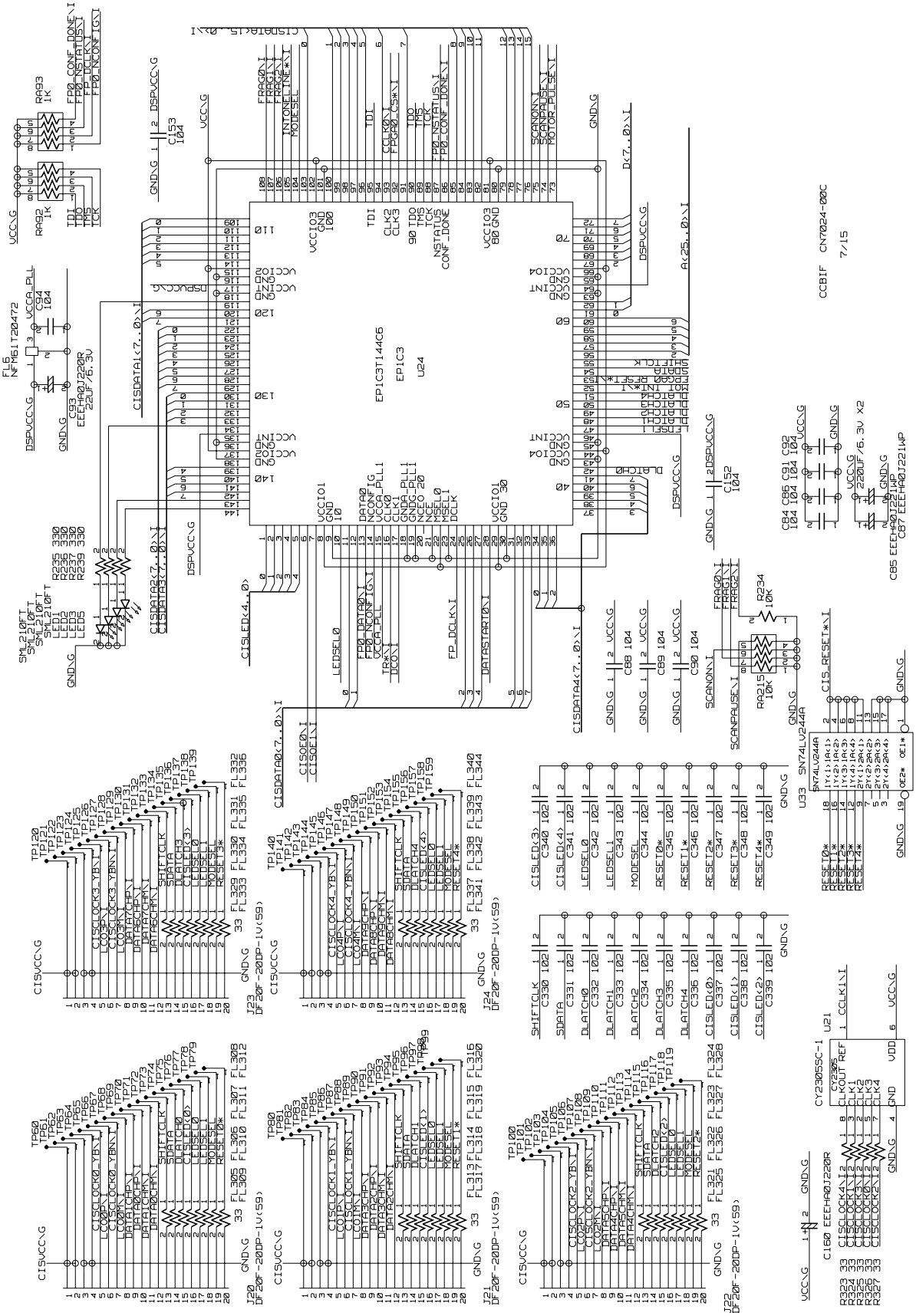
Data Controller Board, CN7024-00 (5/15)



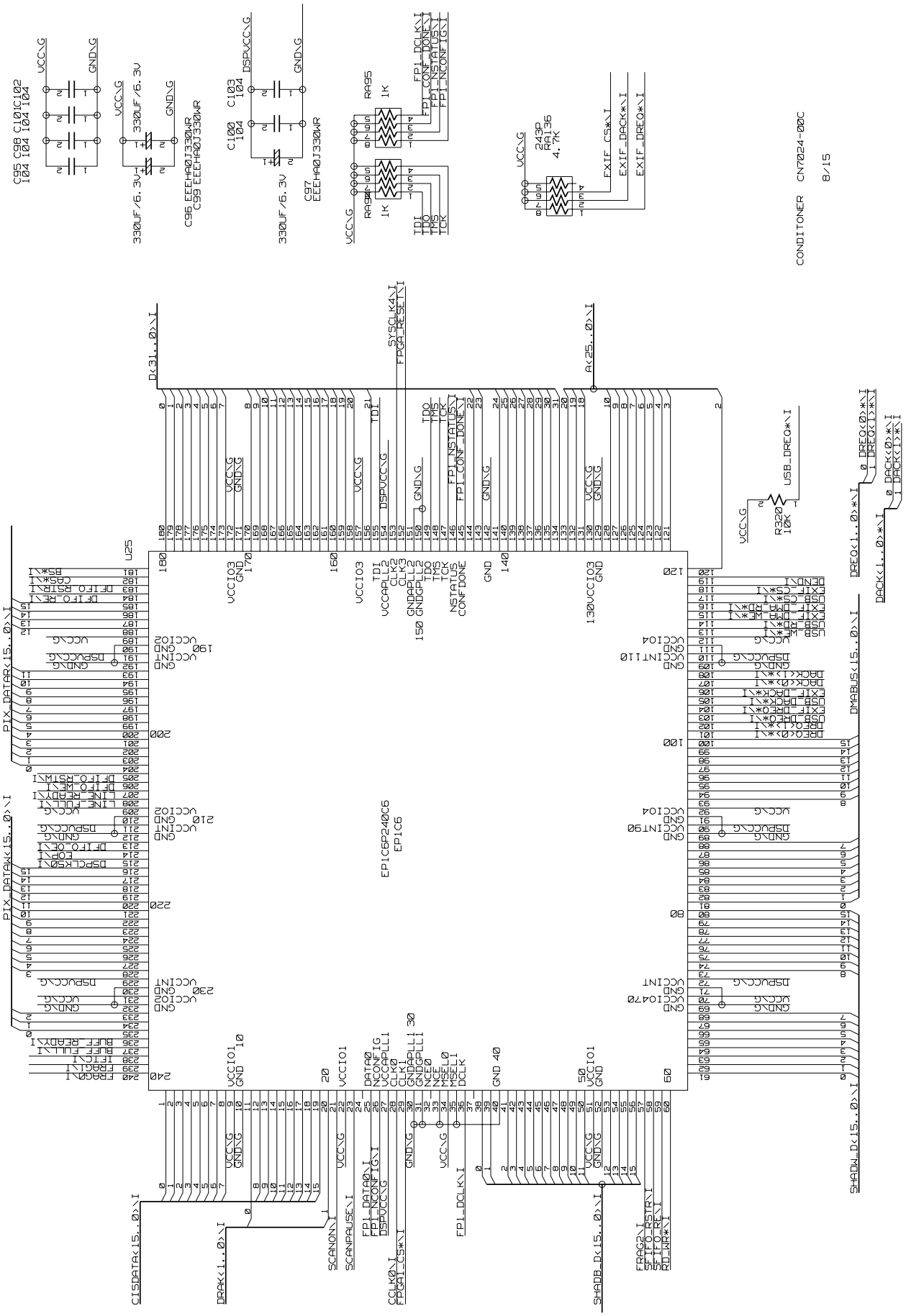
Data Controller Board, CN7024-00 (6/15)



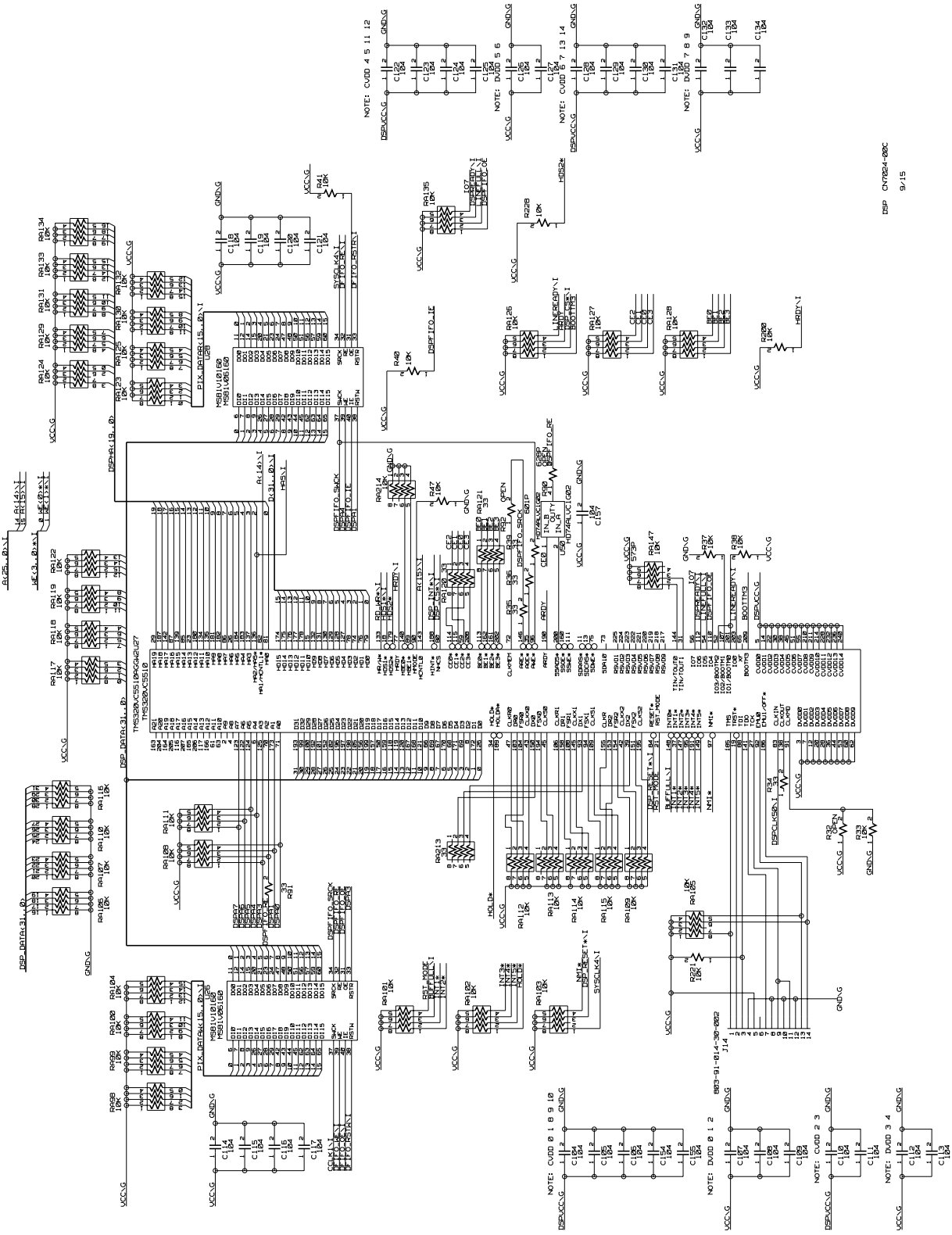
Data Controller Board, CN7024-00 (7/15)



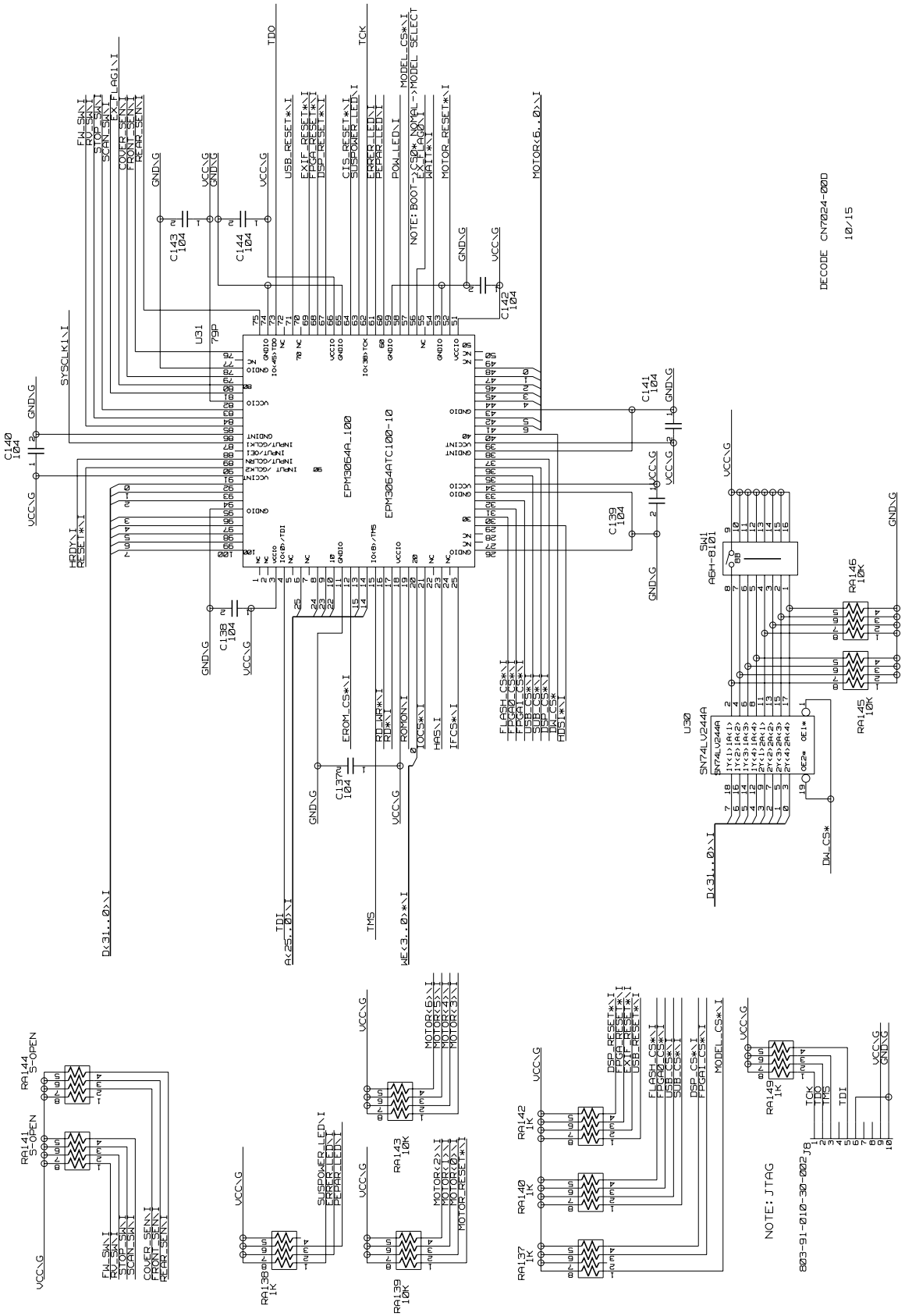
Data Controller Board, CN7024-00 (8/15)



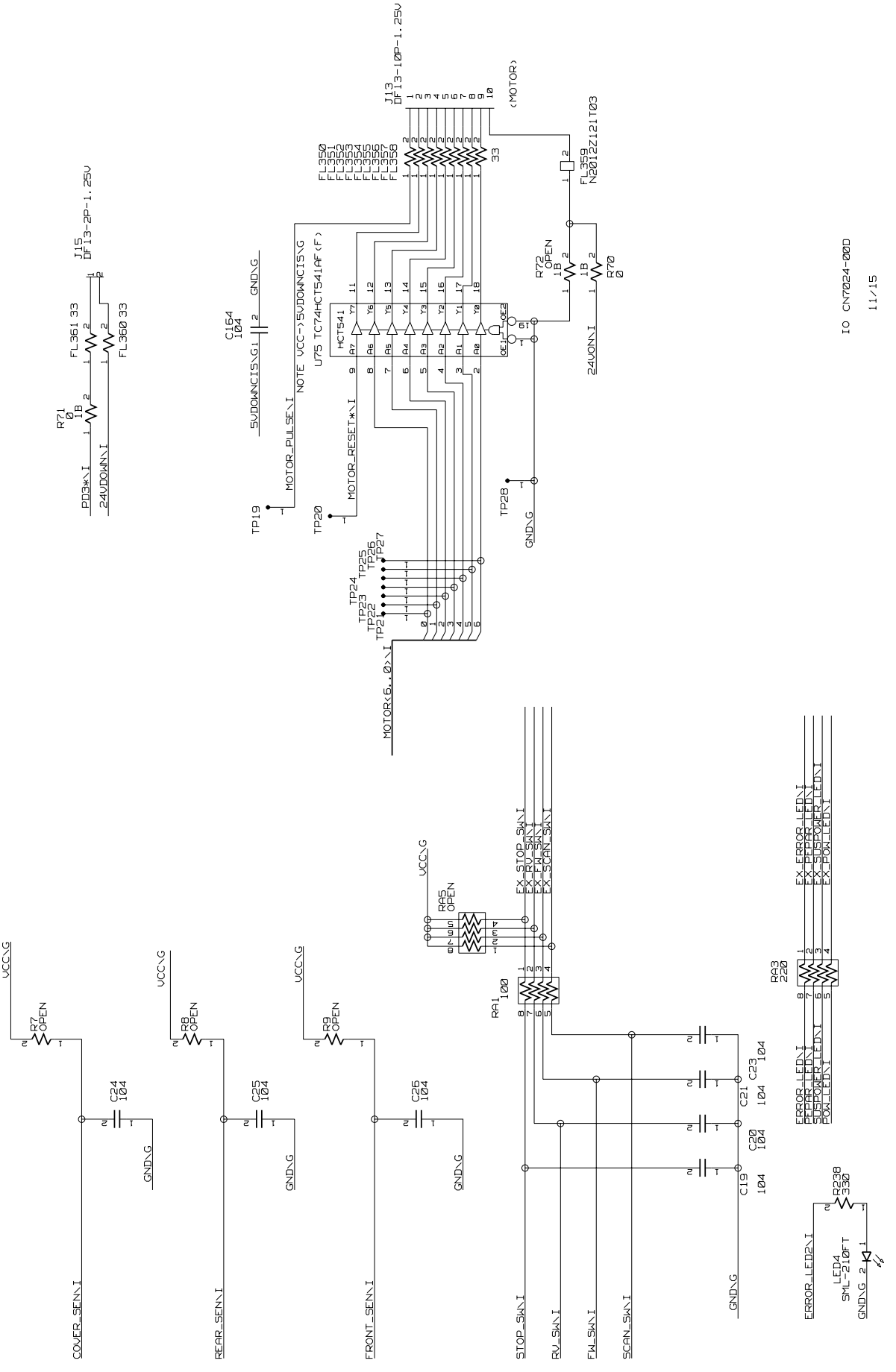
Data Controller Board, CN7024-00 (9/15)



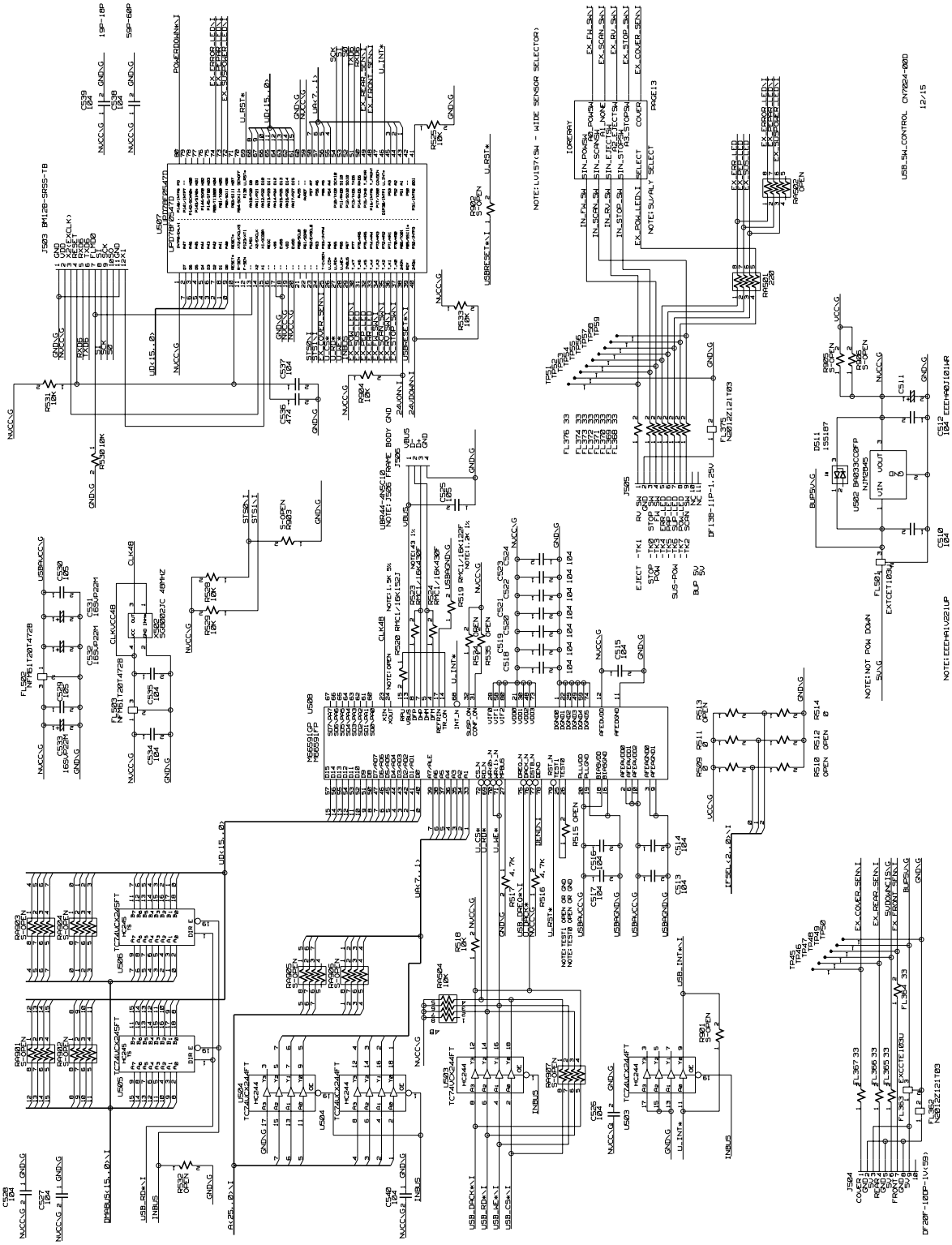
Data Controller Board, CN7024-00 (10/15)



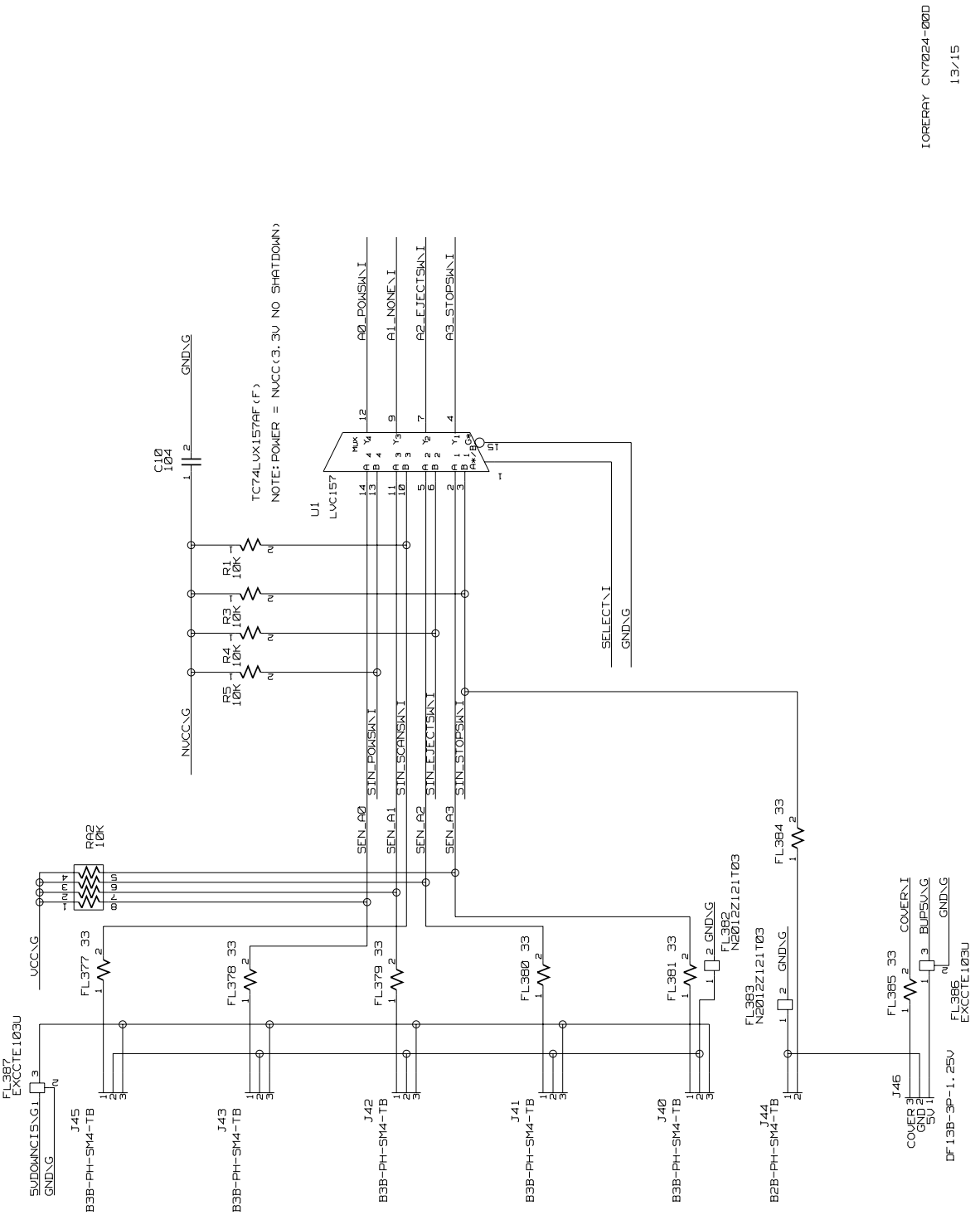
Data Controller Board, CN7024-00 (11/15)



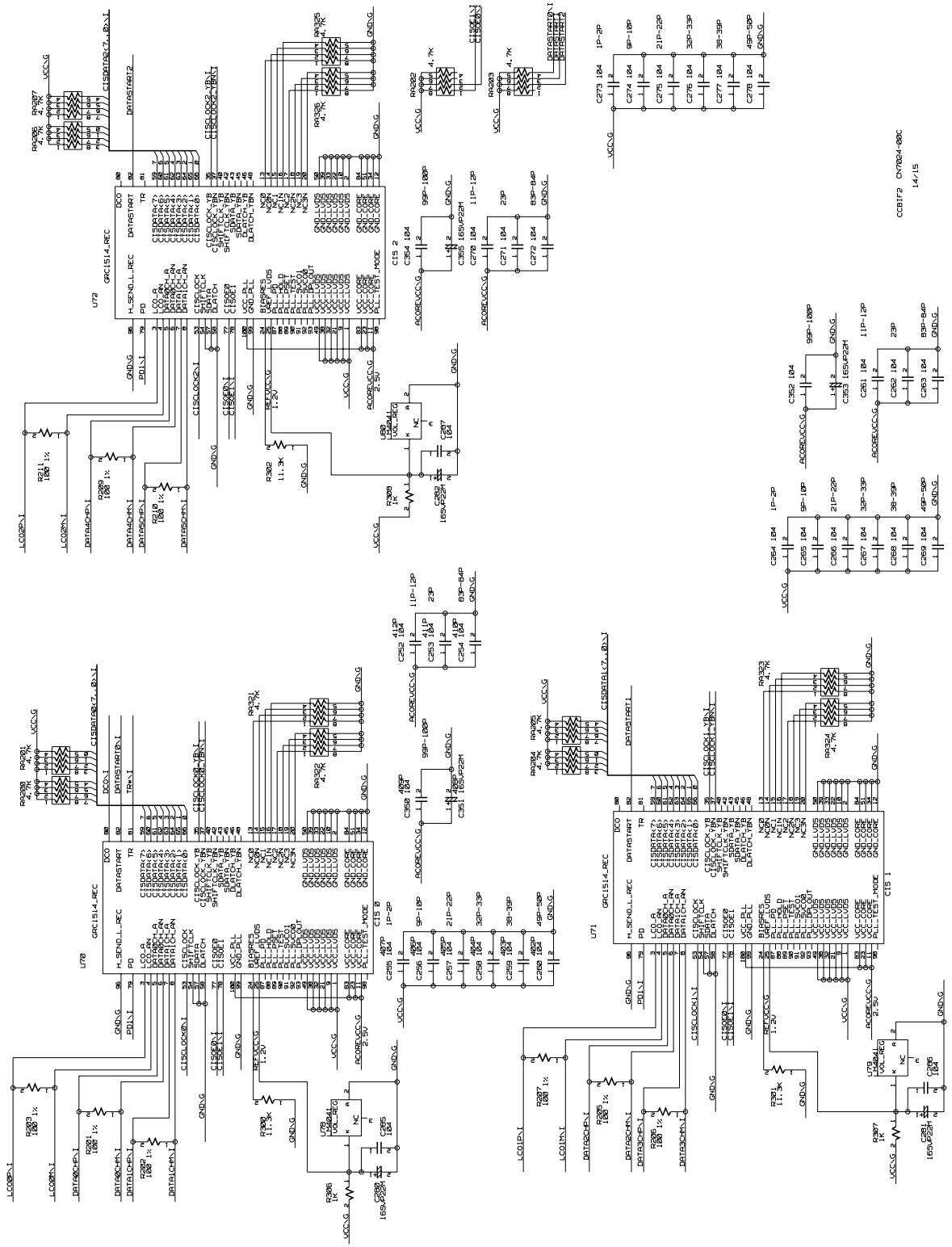
Data Controller Board, CN7024-00 (12/15)



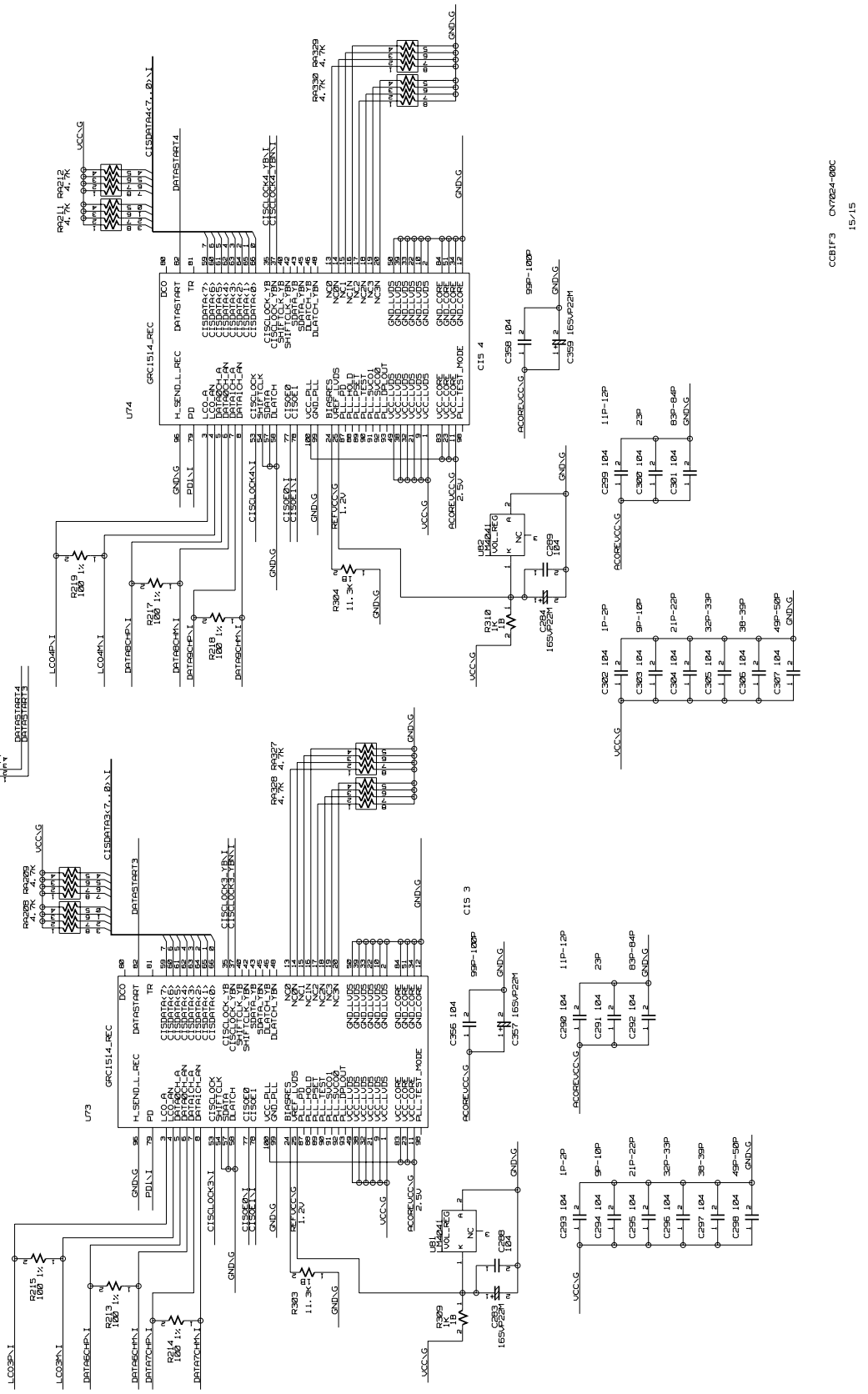
Data Controller Board, CN7024-00 (13/15)



Data Controller Board, CN7024-00 (14/15)

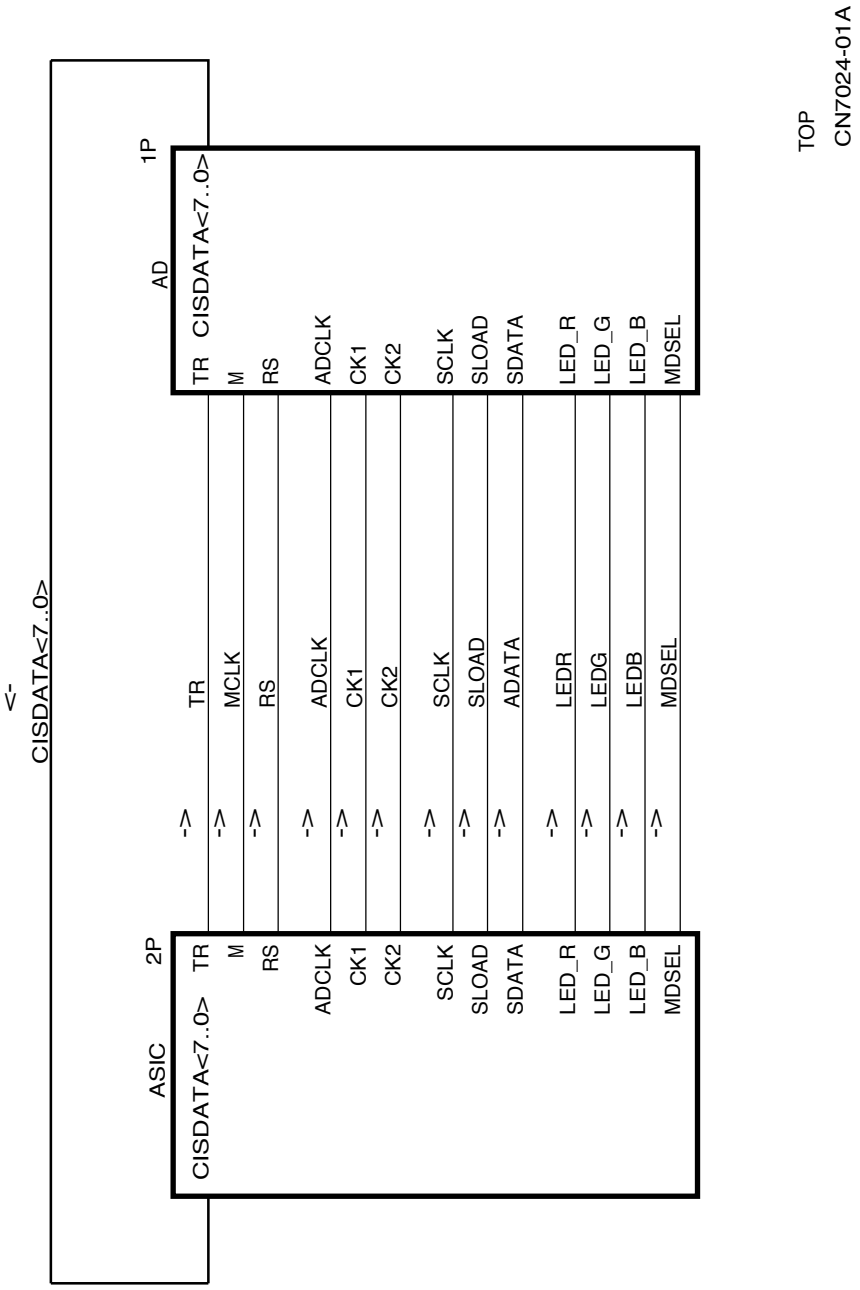


Data Controller Board, CN7024-00 (15/15)

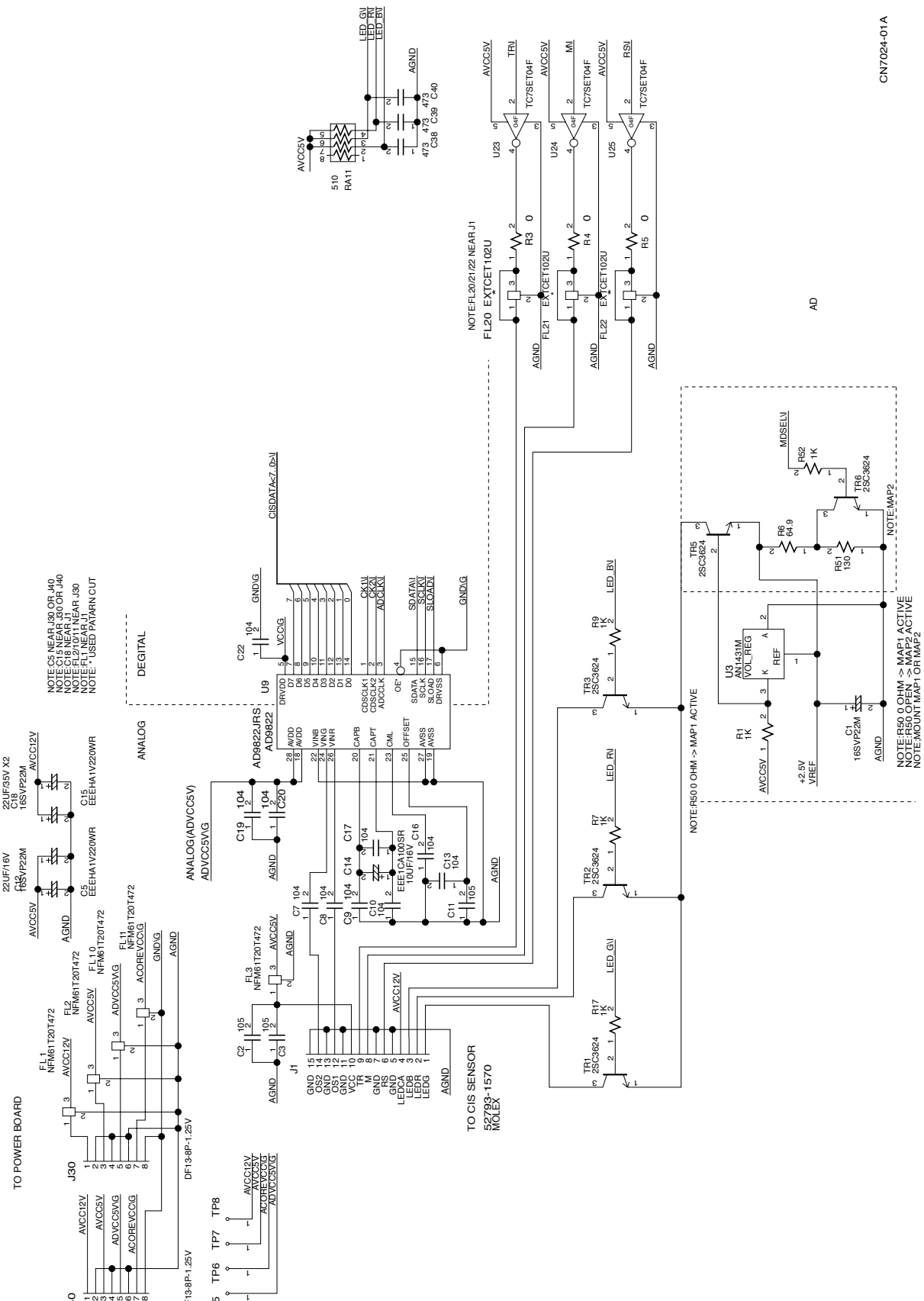


13.2.2 CIS Controller Board

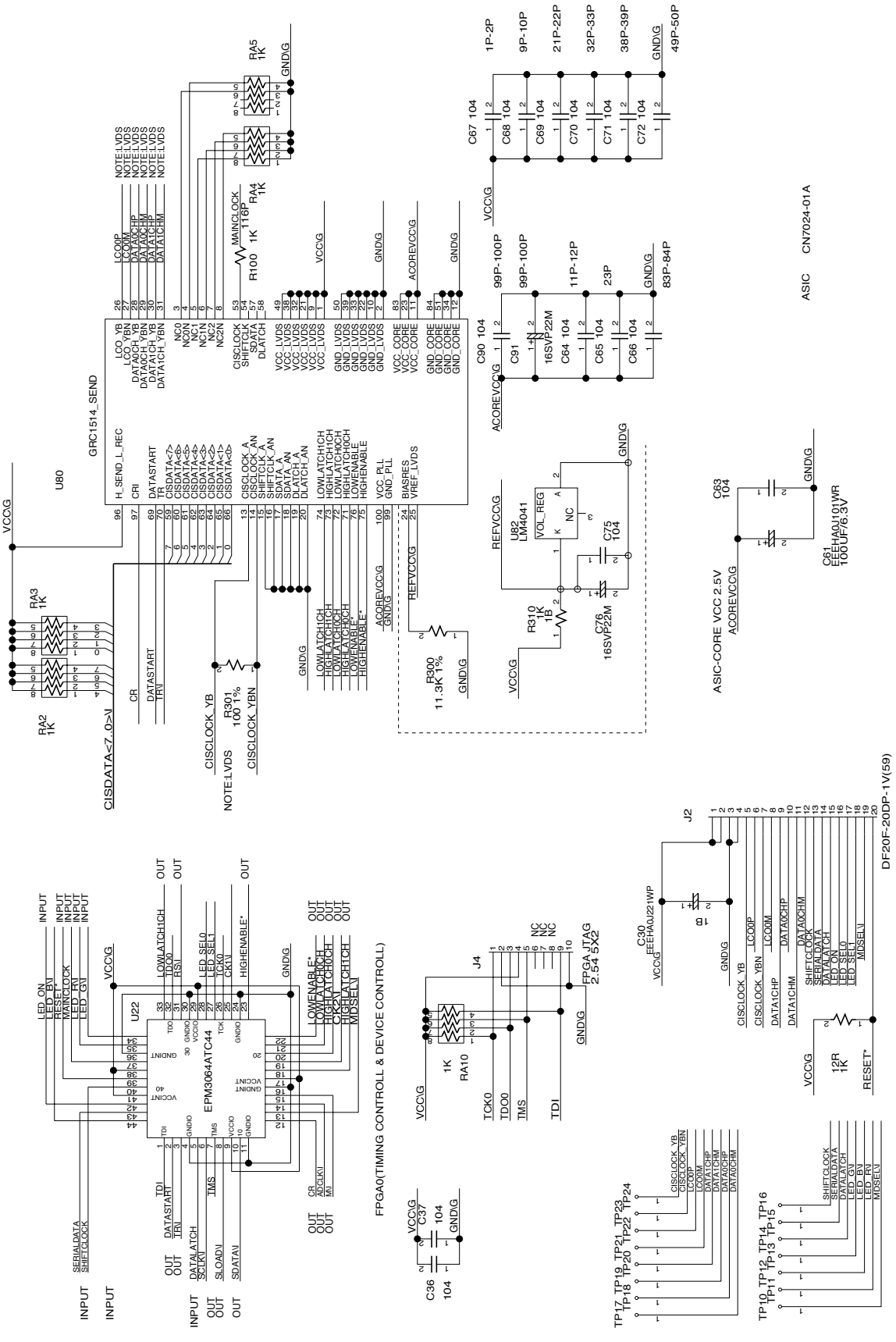
CIS Controller Board, CN7024-01 (1/3)



CIS Controller Board, CN7024-01 (2/3)

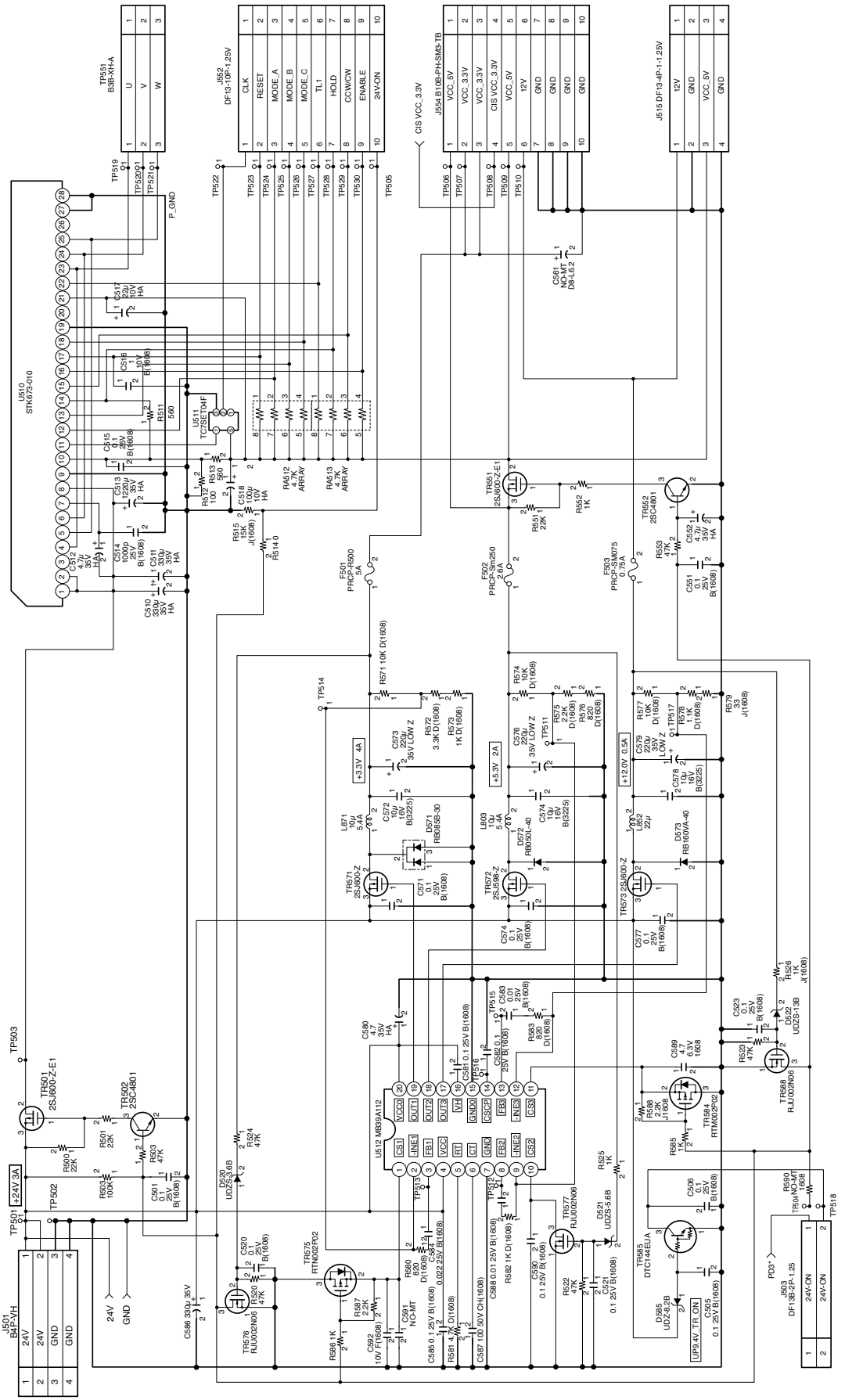


CIS Controller Board, CN7024-01 (3/3)

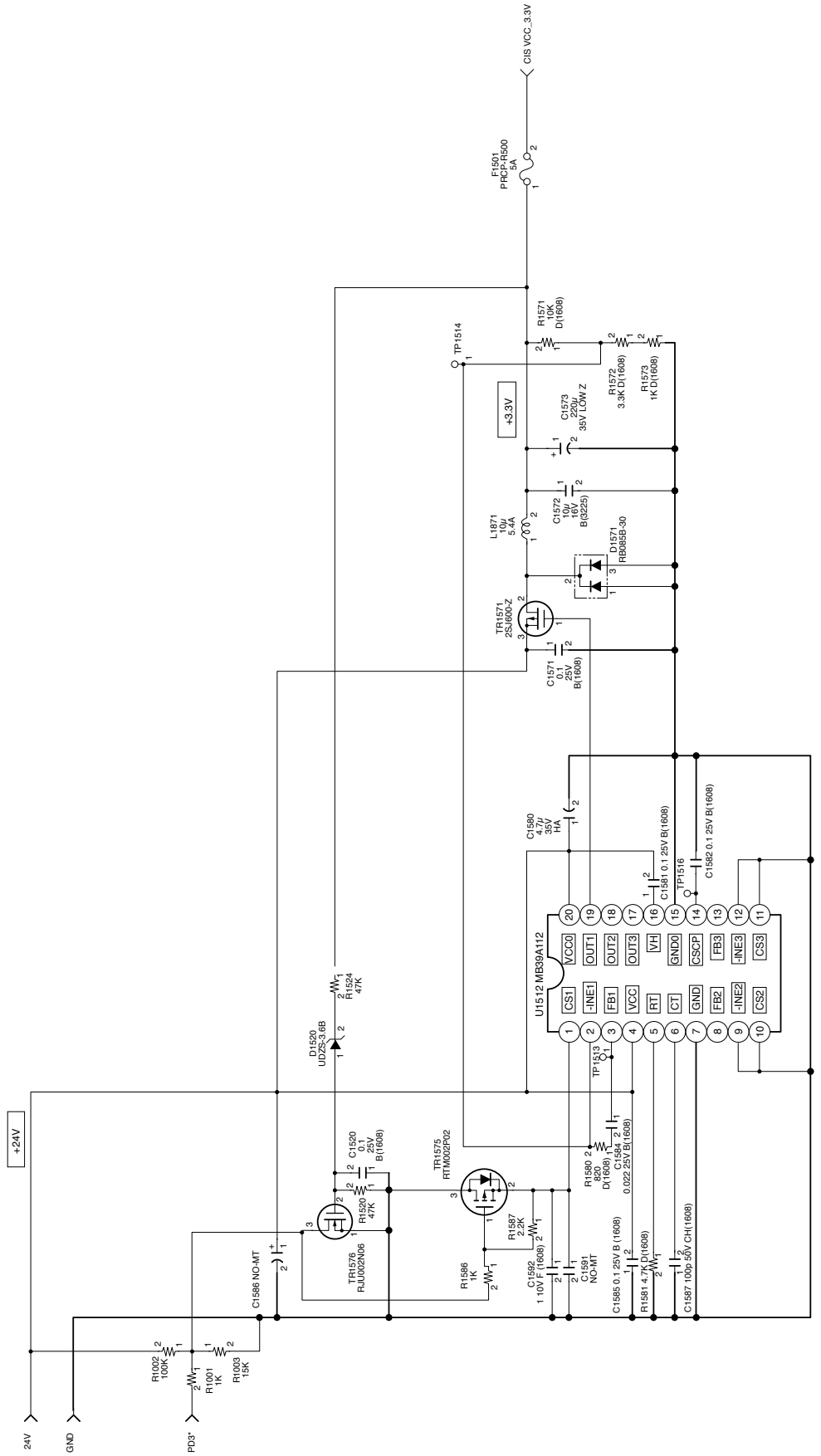


13.2.3 Power Board

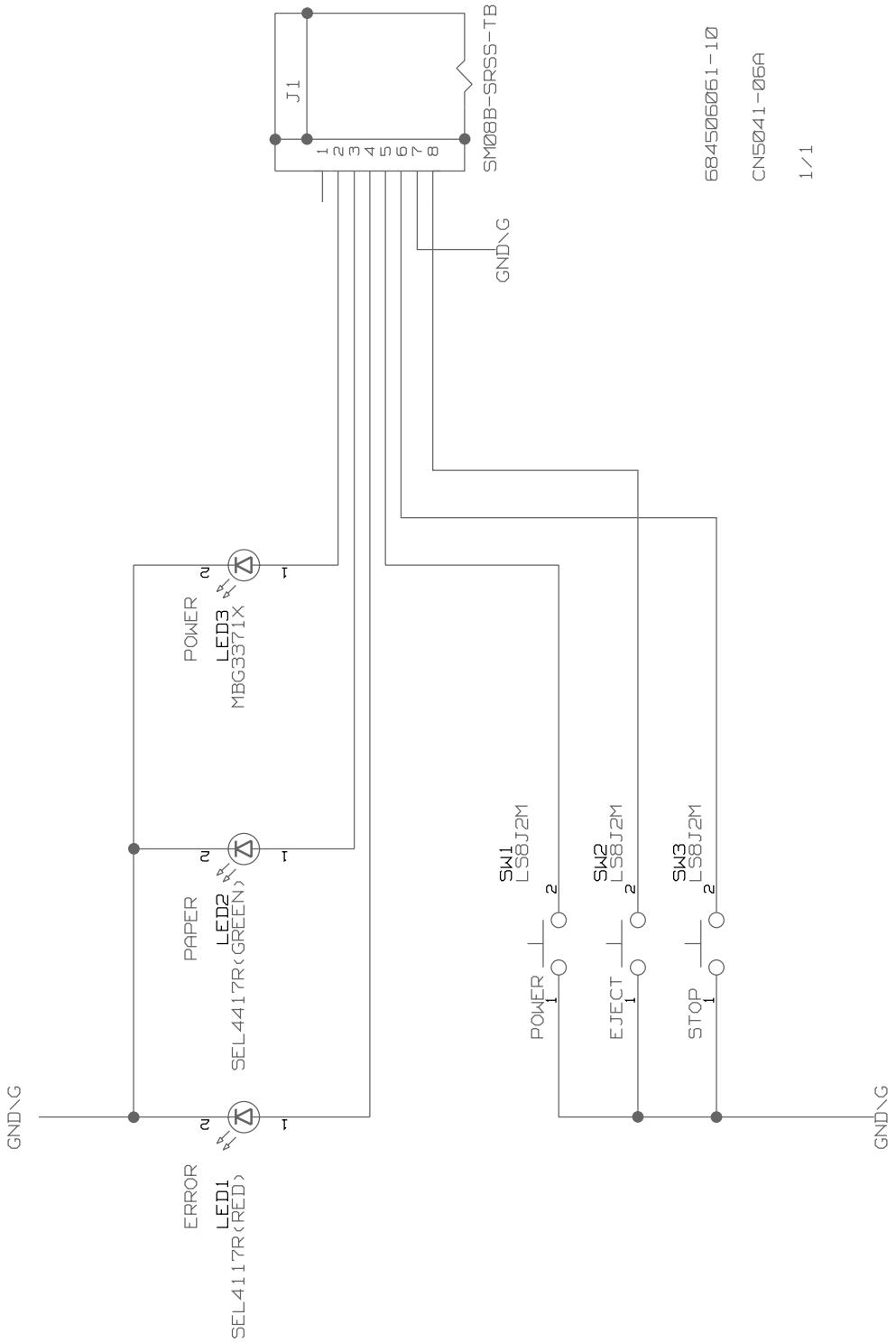
Power Board, CN7024-02 (1/2)



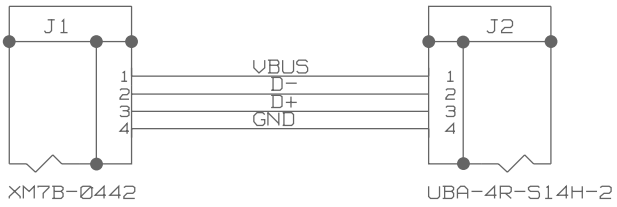
Power Board, CN7024-02 (2/2)



13.2.4 Control Panel Board, CN5041-06A



13.2.5 USB Relay Board, CN5041-07



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CN5041-07

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